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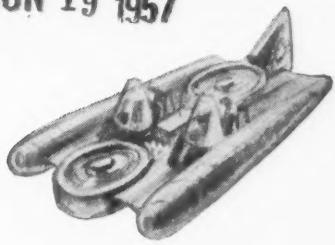

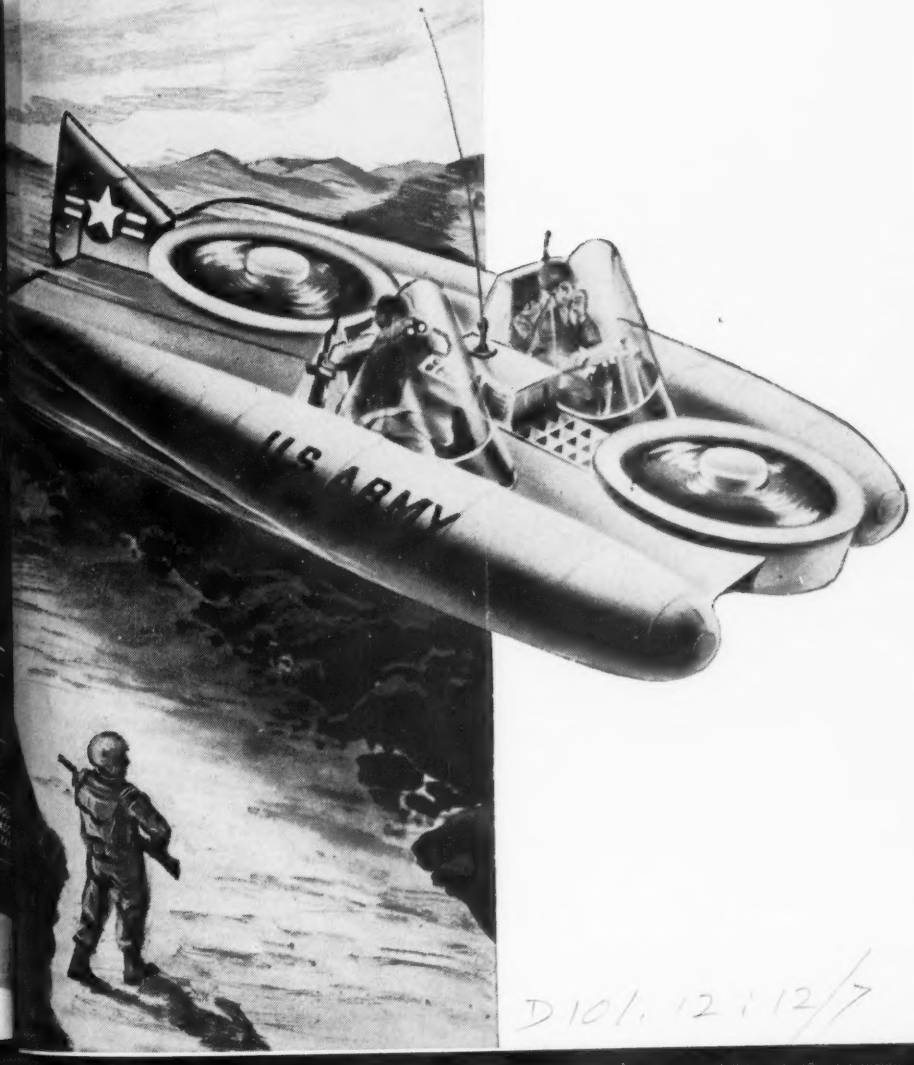

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THE OFFICIAL U. S. ARMY MAGAZINE

ARMY INFORMATION DIGEST

THE OFFICIAL MAGAZINE of the DEPARTMENT OF THE ARMY

The mission of ARMY INFORMATION DIGEST is to keep personnel of the Army aware of trends and developments of professional concern.

THE DIGEST is published under supervision of the Army Chief of Information to provide timely and authoritative information on policies, plans, operations, and technical developments of the Department of the Army to the active Army, National Guard, and Army Reserve. It also serves as a vehicle for timely expression of the views of the Secretary of the Army and the Chief of Staff and assists in the achievement of information objectives of the Army.

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Publication approved by Director, Bureau of the Budget, 20 May 1954.

Manuscripts on subjects of general interest to Army personnel are invited. Direct communication is authorized to: The Editor, ARMY INFORMATION DIGEST, Cameron Station, Alexandria, Va.

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THE ILLUSTRIOUS JEEP whose tire treads marked the path to victory in combat theaters of World War II emerges in new guise in the aerial version depicted on the front cover. More than just an artist's concept, the basic principles of the aerial jeep are even now undergoing analysis in testbed form. It's all part of the intensive research being concentrated to insure improved aerial mobility for the Army, as described in "Army Aviation Looks Ahead."

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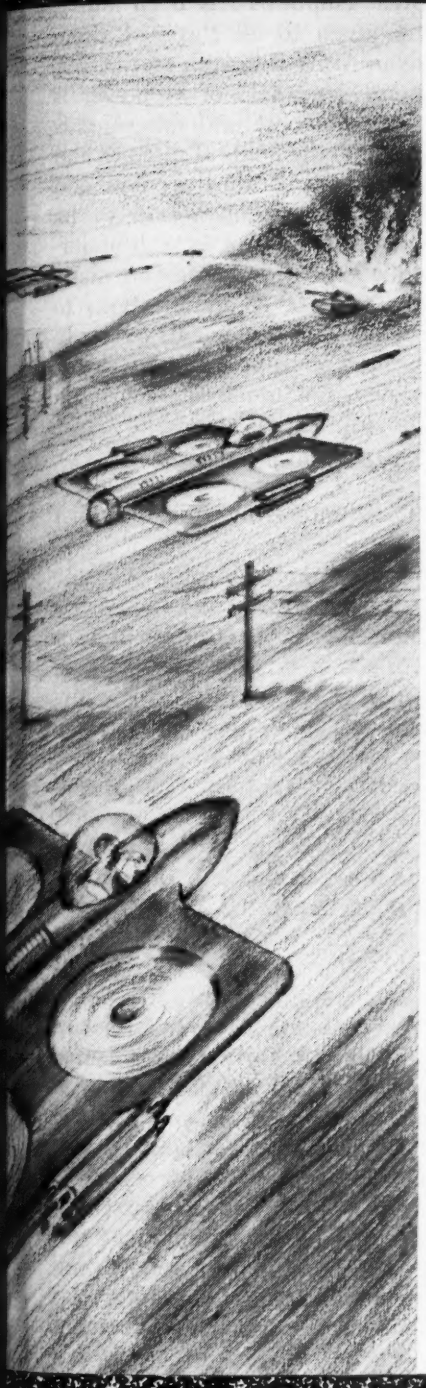


Major General

Hamilton H. Howze

MUCH HAS been written concerning the shape of the battlefield of the future—of the great dispersion between units that will be required to make existence possible on the atomic battlefield, and the changes in operational methods that this dispersion will necessitate.

Although these changes in operational methods seem radical departures, and are in fact very different from what we have known in the past, their application still will depend basically on three capabilities which armies have always required—firepower, communications, and mobility.

For many years artillerymen have epitomized this need in the maxim: "Move, shoot, communicate." These abilities have always been the prerequisites of ground combat; the degree to which technology has made them possible has in time dictated the form of ground combat. If we are to fight in the dispersed formations as contemplated, obviously we are going to need these capabilities in a much more advanced state than we have ever known in the past.

MAJOR GENERAL HAMILTON H. HOWZE is Director of Army Aviation, Office of the Deputy Chief of Staff for Military Operations.

Present-day Fixed-Wing Army Aircraft

Great emphasis has been and is being given to all three of these fields in Army Research and Development. The field of firepower is possibly the best understood, particularly in the fields of atomics and missiles, because they are new and interest in them is bound to be great. Although not as well understood, a similar drive is being made in the field of communications to enable dispersed elements to talk to one another quickly and easily. However, not much is understood of the application of mobility, particularly aerial mobility.

IT IS interesting to note that despite the advances in development of ground vehicles over the past fifty years, the maximum rate of movement of large bodies of troops is not greatly different than it was in Alexander's time—approximately 25 miles per day. There have, of course, been many cases wherein smaller units have developed much larger rates of advance, but even these are not as spectacular in comparison with the past as might be thought.

Many cases can be cited from World War II, in which reconnaissance units covered 150 miles or thereabouts in a day, but these are not really much greater than some cavalry movements that have been made in the past. During Colonel Ranald Mackenzie's famous raid into Mexico in 1873, for example, the 4th Cavalry is said to have made 160 miles in 40 hours, fighting one small battle and several skirmishes during the raid.

The obstacle to increased rates of movement, besides the enemy, has been what has always otherwise been the soldier's best friend—the

ground. The accidents of terrain—the marshes, woods, ravines, rivers ridges, and mountains—can still slow the most mobile Army ground unit to less than the pace of the foot soldier. If the Army is ever to overcome these obstacles and obtain the mobility differential that the dispersed formations of the future will require, it frequently will have to take to the air. In taking to the air, however, it must do so in extension of ground combat.

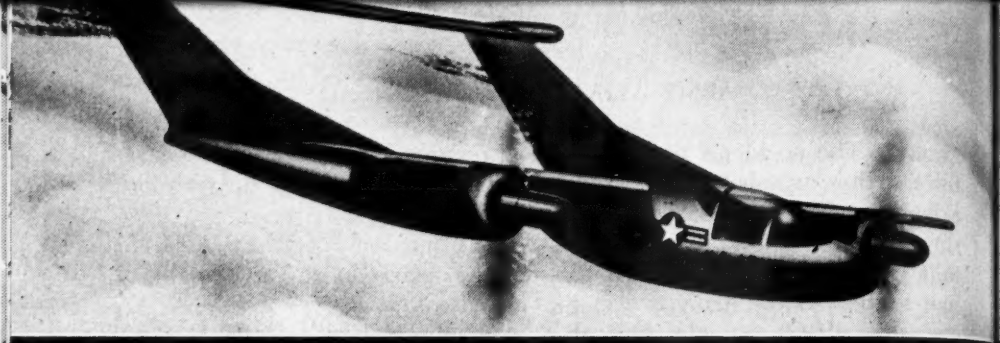
Present-day Helicopter Types

ARMY AVIATION must never lose sight of the basic principles of ground combat, that fire and movement in contact with the enemy have always been essential to the defeat of ground forces and the domination of the ground. In other words, the Army should go no higher and faster than is necessary to remove the blocks imposed by terrain; and this may be no more than a few feet above it.

The missions of Army Aviation in the provision of aerial mobility are sixfold:

- Observation,
- Rapid movement of troops and equipment,
- Movement of critical supplies,
- Air mobility for ground reconnaissance (the Sky Cav mission),
- Command control and liaison,
- Battle casualty evacuation.

At present the Army has considerable capability for fulfillment of these functions in the form of both fixed and rotary wing aircraft. These aircraft, be it noted, are good aircraft, as advanced as is possible within the limits of the state-of-the-art when they were designed.



High Performance Observation Aircraft

AVAILABLE TYPES

THE fixed-wing aircraft in the Army today are the L-19 light observation airplane, the L-20 Beaver utility airplane, the L-23 Twin Bonanza two-engine command airplane, and the U1A Otter light transport airplane. This latter light transport airplane has a payload of about 1½ tons or will carry about 10 troops.

In the helicopter field the Army has two types of reconnaissance and observation helicopters, the H-13 and H-23; a utility helicopter, the H-19, carrying a payload of about 1500 pounds; two light cargo helicopters—the H-21 and H-34—with payloads of 1½ tons; and a medium cargo helicopter, payload 3 tons.

Although these are all good aircraft, they do not have the characteristics that will be needed in the future. It is difficult for them really to become an integral part of the ground Army in the field. In the fixed-wing aircraft, landing and take-off runs are too long; and maintenance of both types is too difficult for forward operations.

Individual Lift Devices

DHC-4 Caribou (Three-Ton Transport)

In its development of future aircraft the Army is attempting to insure four things—

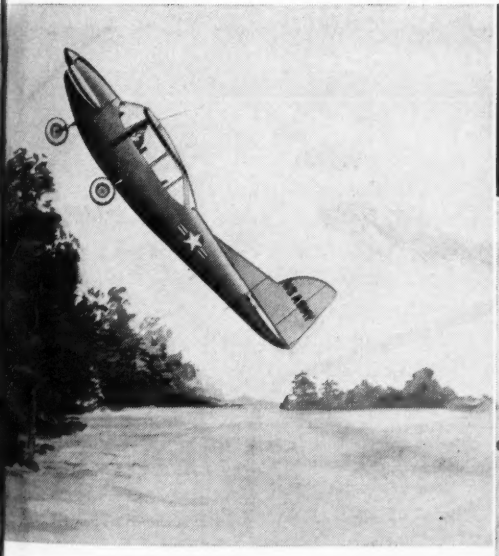
First, true ease of maintenance under battlefield conditions;

Second, a true short take-off and landing capability for fixed-wing aircraft. In effect, this means that we should not in the future consider any airplane which will require more than 600 feet to take off or land over a 50-foot obstacle (*i.e.,* a ground run of about 250 feet).

Third, the capability in fixed-wing airplanes of landing or taking off on rough, unprepared, even plowed fields.

Fourth, for all aircraft, a high degree of all-weather capability. This means that the aircraft must be able to operate under any conditions of visibility under which ground vehicles can be effectively operated. Attaining this capability involves development of better instruments and better navigational and air traffic control systems.

To give the Army the aircraft it will need, the Army aviation re-



Light Observation Plane

Light Observation Helicopter

search and development program is concentrating in three areas—

- A short-range program to give the Army conventional type aircraft which will be able to do the job better than those now available.
- A longer-range program to replace these conventional aircraft with more unconventional types which will better perform the basic functions.
- A new approach in completely unconventional aerial vehicles designed as true replacements for ground vehicles.

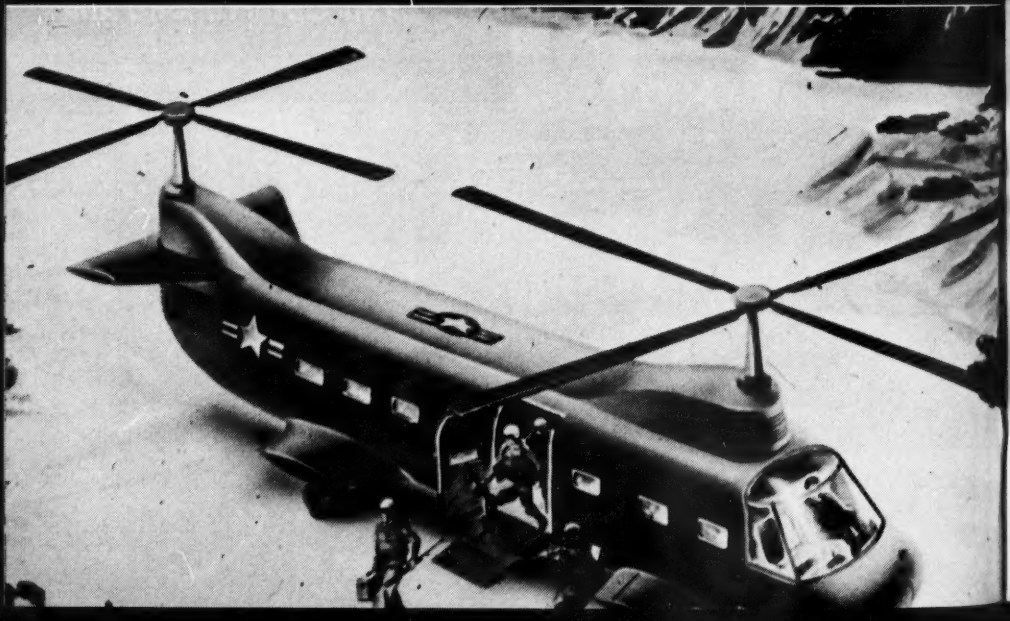
FIXED WING DEVELOPMENTS

IN THE first or short-range program, we are seeking improved aircraft in both the fixed and rotary wing field. By 1960 or shortly thereafter we hope to replace all of the aircraft that we now have and add some new ones to the family.

For a long time to come, a large portion of the aircraft in Army aviation are bound to be small observation airplanes like the L-19. We hope to select a replacement for the L-19 within the next two or three years. This replacement will have a little better payload, a little better cruising speed, and a better unprepared short field landing and take-off capability.

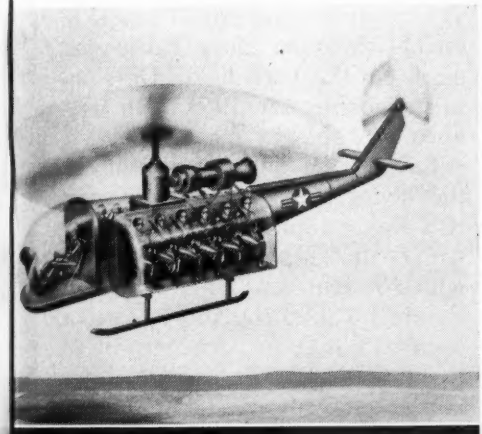
In addition to this light observation capability, however, the Army

Medium Cargo Helicopter



has a strong need for a higher performance observation aircraft for shallow penetration flights over enemy-held areas to obtain information and to acquire targets for our own ground-to-ground missiles. One of its primary functions will be to carry electronics surveillance equipment, such as infra-red and radar, that the Army will use for gathering intelligence information and target acquisition data.

H-4 Utility Type Helicopter



H-40 Troop Transporter

Accordingly the Army now has under development, in conjunction with the Marine Corps, a higher performance observation airplane. Powered by twin turbo-prop engines, it will have a maximum speed of about 275 knots, a loitering speed of less than 100 knots, and a short take-off and landing capability. This last will enable it to live with the Army in the field.

NEXT in the fixed-wing series are replacements for the L-20 "Beaver" and the L-23 command aircraft, which we hope to be able to select in 1959. As visualized, these aircraft will be quite similar to the ones they are replacing but will have better rough field and performance characteristics.

The largest fixed-wing airplane which the Army is purchasing for test is the Dehaviland "Caribou"—the first airplane in which the Army has been permitted to exceed the 5,000 pound weight limitation. Weighing about 13,000 pounds empty, it will have a payload of 3 tons, a cruise speed of about 150 knots, and will have very good short field landing and take-off capabilities. The Army is to get five for service test early in 1959.

ROTARY WING PROGRESS

IN THE field of helicopters the Army's first effort is to find a light inexpensive substitute for our present reconnaissance helicopters. While existing types are very good machines, they are expensive and difficult to maintain under field conditions. Accordingly we are seeking a simple two-place machine which will weigh about one-half and cost about one-half to one-third, com-

pared with present reconnaissance helicopters. What we are really seeking is a "Model T" approach—a machine that could be maintained in the front lines and which we will be able to afford to buy on a much larger scale than at present.

Next in the helicopter family is the H-40. Built by Bell Aircraft, it has already made its first flight. This—the first U. S. helicopter designed to use a gas turbine engine—will have greatly increased performance capabilities over the Army's present utility helicopters and will be more compact and rugged for forward area use.

The H-40 will be a very agile machine—a real "aerial hot-rod." In addition to operating as a utility cargo, command and medical evacuation helicopter, it will be very adaptable to use in Sky Cav units, both as a fire support helicopter* mounting machine guns and rockets, and as a troop carrier for battlefield transport. The Army will start getting these in 1958.

The next helicopter under development is in the three-ton payload class and will be developed as the largest internal load cargo-carrying helicopter. Again the goal here is increased performance and much easier maintenance.

One chief use of this type helicopter, besides its normal cargo carrying function, will be to provide mobility for missile units to enable them to move freely and easily on the battlefield. Development will start in 1958, with issuance probable by 1962-63.

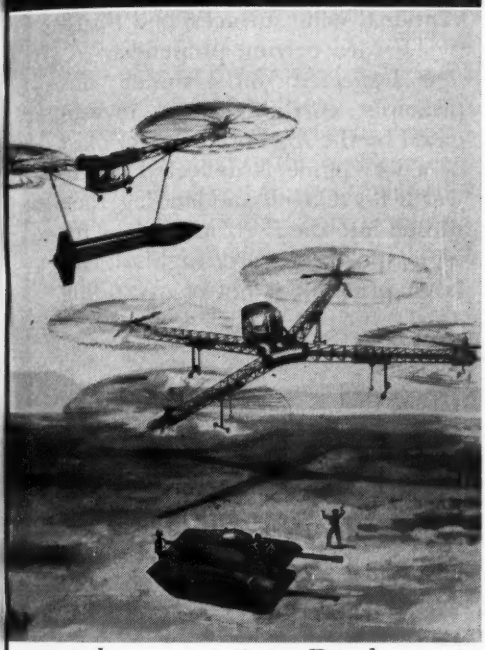
Last in the helicopter family is the "flying crane." Essentially, this is a flying framework to give the Army the heavy lift capability which it requires. This helicopter should be able to take payloads of up to 12 tons for distances of 25 to 50 miles. Besides being used for movement of critical supplies, it

*No attempted substitute for the fighter-bomber, this aircraft will merely "elevate the gun platform," firing always from friendly into enemy territory.

can serve such purposes as lifting small armored vehicles over barriers, putting bridging into place and moving other heavy materiel about the battlefield.

Aircraft of this type are being studied by the helicopter industry

lying Crane—An Artist's Concept



at the present time. Development should be started late this year, with a view to delivery by 1962-63. This machine rounds out the family now under development to replace or supplement existing aircraft.

IN THE longer range program, a more unconventional approach is being followed. Recent advances in the state of the art have made it apparent that the Army may, in the future, be able to perform with fixed-wing aircraft many of the tasks for which heretofore it has had to use helicopters. Because the helicopter cannot, for technical reasons, attain the same speed and range as fixed-wing aircraft, it is very much in the Army's interest to replace as many helicopters with airplanes as possible with the additional hope that the cost and complexity of the unconventional fixed-wing aircraft will at least not exceed those of the helicopter.

Very likely, within the next several years, it will be possible to achieve vertical take-off and landing with airplanes that will also be capable of relatively high speed forward flight. Such aircraft, however, will not completely replace the helicopter. The helicopter has an agility in operations close to the ground and in confined areas which will be very difficult to supplant for many years to come.

Because it is largely an unexplored field and because development of prototype aircraft is expensive, the Army is employing a "flying test bed" approach.

A TEST BED is a small research aircraft which can be built cheaply, almost on the baling wire principle, to investigate possibilities which might be applied to larger aircraft. Following are the principal areas currently under study by this method:

● *Boundary Layer Control.* This is a means of controlling the air flow next to an air foil to obtain greatly increased lift. This, in turn, has the effect of lowering the stalling speed of the aircraft and thereby lowering its take-off or landing speed.

● *Deflected or Vectored Slipstream.* The deflected or vectored slip stream principle makes use of a

very heavily flapped wing which has the effect of deflecting the air flow downward to give very short or even vertical take-off and landing possibilities.

● *Rotatable Ducted Fans.* Ducting a fan or propeller gives it about 25 to 30 percent more efficiency than that obtained from an unducted propeller. In this test bed the ducts are rotated to a vertical configuration for take-off and landing and to a horizontal position for fast forward flight.

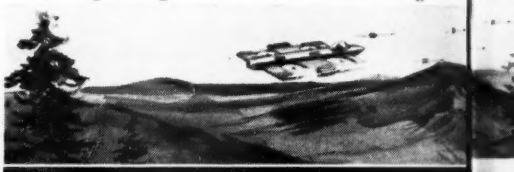
● *Tilt Wing.* In this design the whole wing with the propellers mounted thereon is rotated vertically for take-off and landing and into a horizontal plane for forward flight.

● *Multi-wing.* This is an old concept being reinvestigated because it is a means of "bathing" far more wing surface in the propeller slip-stream, thus increasing lift and making possible a short wing span in Army aircraft.

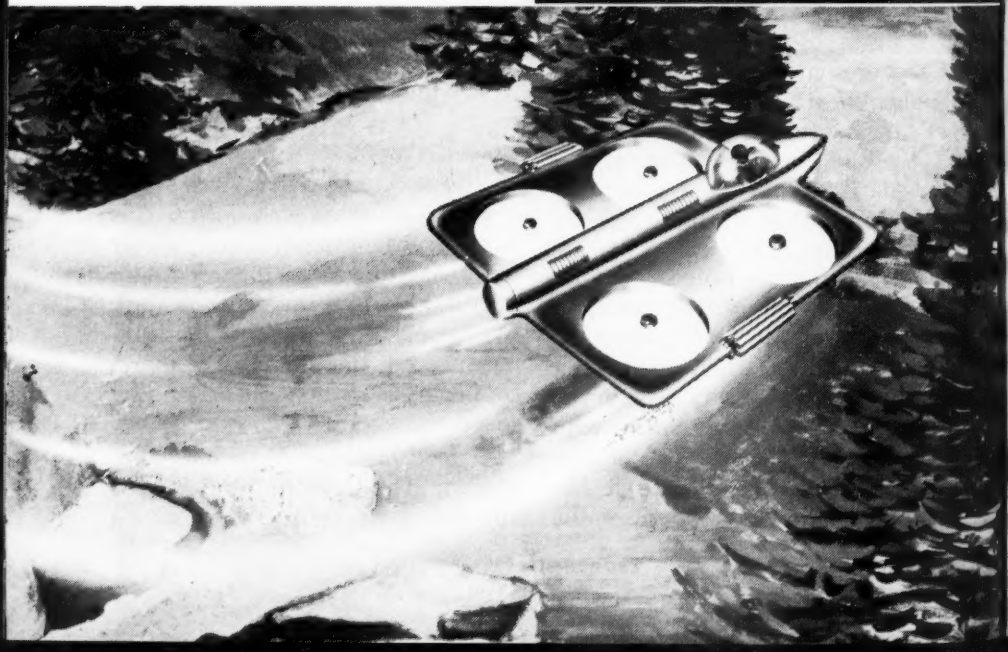
● *Rotating Rotors.* In this configuration rotors are placed in a horizontal plane for take-off and landing and in a vertical plane for forward flight.

● *Unloaded Rotor.* In this, the conventional rotor is used to give the aircraft vertical flight. For fast forward flights the rotor is unloaded; that is to say, it is flattened out and allowed to windmill or idle. Lift is taken over by conventional wing surfaces, and thrust by forward driving propellers.

● *Deflected Jet.* Under this principle, currently being investigated by the Air Force, the jet blast of a jet engine is deflected downwards for take-off and landing, then turned into the horizontal plane for high speed forward flights. This latter principle is not of overriding



Aerial Assault Vehicle



interest to the Army because jet engines at the present time are not efficient at low altitude. It will, nonetheless, bear watching.

THE majority of these test beds should fly within the next year. By working with them under many conditions, the Army hopes to determine which approach or approaches are best suited to the Army's operating conditions, and thus offer us the greatest chances of success in the future. The principles thus developed will eventually be applied to the replacements for the fixed-wing aircraft being developed under the short term program. Eventually, too, this should enable fixed-wing aircraft to take over many helicopter missions.

DIRECT LIFT DEVICES

THE third and newest field of endeavor in Army Aviation is that of "direct lift devices."

The Army's initial approach in this area has been made with the Delackner Aerocycle and the Hiller Flying Platform. The Flying Platform in particular, in recent months, has shown much promise, and the Army is moving quickly to exploit it. However, it cannot carry all the equipment which the soldier needs on today's battlefield, much less that of the future.

Accordingly the next step in this area is, probably, the aerial jeep. Ultimately the goal is to provide a vehicle which can stay in the air for several hours, move at speeds of up to 50 miles an hour and carry 1000 or so pounds of equipment and weapons. Essentially, this would be a jeep that could move over the ground instead of on it. It would be able to take advantage of the ground for protection yet be freed from the ground's limitations.

This machine would be able to sneak up to a ridge line to permit a look over the top, or to fire a burst into a barn or haystack to see if anything was there. It should be able to scoot down ravines and fly over woods if necessary, but should spend most of its life within a few feet of the ground. The possibilities of this vehicle—for reconnaissance, messenger work, patrolling—are limited only by the imagination of the user.

If this machine proves successful, the next step will be to enlarge the family—to build larger machines with increased firepower. Another possible adaptation may be an aerial truck.

This, then, is the Army's program in aviation research and development – encompassing the conventional, the unconventional, and the radical—as a major contribution towards keeping the U. S. Army the most mobile in the world. As the future brings more radical concepts into view, Army aviation research will, we hope, stay with or ahead of them.

With numerous projects approved and construction under way at many installations, a brighter outlook is in prospect for

FAMILY HOUSING FOR THE ARMY

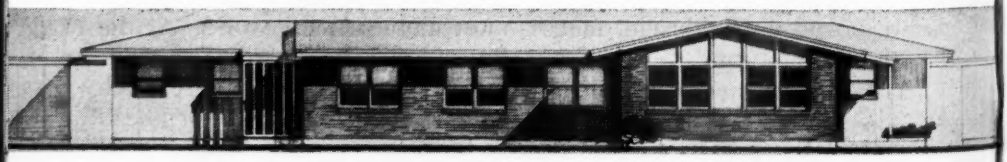
Colonel Paul H. Symbol

FROM Fort Lee, Virginia, to Fort Ord, California, and points between, the din of carpenters, bricklayers and builders at work was a welcome sound this spring to Army members, their families and dependents. A far-ranging Army housing program was in full swing.

COLONEL PAUL H. SYMBOL, General Staff, is Chief, Army Housing Division, Office of the Deputy Chief of Staff for Logistics, Department of the Army.

Indicative of its size and scope, the Army during the past two years has provided more housing than in all previous years combined, throughout its entire history.

Underlying all this activity, and a necessary preliminary before the first foundation could be plumbed and the first footer laid, was a far-reaching series of legislative enactments, Army directives, and engineering studies extending back over



many months. More complex than the blueprints of any single structure composing it were the legislative, fiscal and engineering problems which had to be overcome before the family housing needs of the modern Army could be met.

How many housing units are required, for what size Army, at what location? What type construction, both on and off post, would best serve the Army's immediate and long-term needs? What standards and cost ceilings should be imposed? What variations in architectural specifications would be most appropriate in temperate, desert climates? These were but a few of the questions which had to be resolved by Army and legislative planners before the first dirt could be turned, and "Men at Work" signs mushroom across the land.

AT EVERY STEP, accurate figures are a prime essential for successful planning. The measure of need for dependents' housing is derived from data submitted annually to the Department of the Army from all Army installations in the United States and world-wide, wherever Army personnel may be. In calculating requirements, personnel strengths are projected ahead as far as reliable estimates are known. Figures as of the present, a year ahead and for the long-range "permanent peacetime establishment" are all considered.

Gross housing requirements are calculated from the estimate of the number of military personnel entitled to quarters allowance under permanent legislation, plus essential civilian employees whose duties require that they live on post.

From this gross housing requirement total is deducted the number of adequate units under military control—that is, public quarters in being or authorized, units under Government rental, and other categories, such as housing made available by agreement with foreign governments.

The availability of "community support" also is carefully taken into account. This is defined as adequate housing at a fair price, not more than fifteen miles or thirty minutes' driving time distant.

Based on such studies, the Army has determined that there exists a gross world-wide deficit of 100,000 family housing units—*i.e.*, families which the Army cannot accommodate in its own facilities or in suitable housing in nearby communities at reasonable rent.

Architect's concept of three bedroom duplex enlisted quarters for Southwest United States (opposite) reaches fulfillment in completed buildings at Fort Hood, Texas (top left).

MCA CONSTRUCTION

IN PART, the procurement of dependents' housing under the present program is by the conventional method. Contracts are let by competitive bid for construction principally on Government-owned land, planned and supervised by the Corps of Engineers, using Military Construction, Army (MCA) funds which are appropriated for this specific purpose by the Congress. Structures thus erected become the property of the Army upon completion. In the long run, this is probably the least costly method of procurement.

Many of the MCA housing units

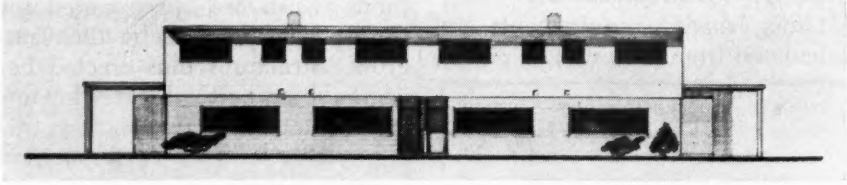
COMPANY OFFICER'S QUARTERS, TWO AND THREE BEDROOM DUPLEX, SOUTHWEST UNITED STATES.

recently completed or currently under construction at numerous Army installations in the United States were designed by architect-engineers retained by the Corps of Engineers. This type of Army housing is intended to meet varying climatic conditions in five major areas.

Housing units are provided as row types, four to eight in a building with separate entrances; semi-detached or duplex houses; and a proportion of single houses. Generally the designs are of a contemporary or modern style with flat roofs or slightly pitched roofs with wide overhangs. Single and duplex houses are mainly one-story ranch-style, while the row types are mostly two-story units. In one instance in the eastern part of the country a modified Colonial design with red brick exteriors and gable roofs was utilized. In a few instances designs prepared for prefabricated construction were used.

As a basic requirement, all Army family housing units must be of maximum quality within the limitations of size and cost imposed by law. While units for officers and enlisted men differ in floor area, quality of construction is the same for both. Designed for low maintenance cost and relatively long life, this type housing compares favorably in quality with private residential construction in the same price range and size.

UNDER Army housing criteria set forth in Army Regulations 415–33, two-, three-, and four-bedroom units will be designed, endeavoring to obtain for each project the maximum possible number of three-bedroom units within the cost limitation. Designs will include a minimum of 1½ baths for three-bedroom units, 2 baths for four-bedroom units. Not less than 80 square feet of storage space will be provided



FOUR-FAMILY ROW HOUSE, TWO AND THREE BEDROOMS, COMPANY GRADE OFFICER'S QUARTERS, FORT LEWIS, WASHINGTON.

for each housing unit, 50 square feet of which will be inside storage.

Space for laundry washer and dryer is provided, usually in the kitchen. Because of cost limitations, basements are not usually included. Usually the first floor is a concrete slab, laid on the ground. Construction is of the wood frame type with brick veneer exterior walls in some models and tinted stucco or wood siding in others. The forced air heating system, individual to each unit, is fired by gas or oil. Fireplaces are frequently provided in houses for senior officers. Instead of radiators, heating ducts are used around the perimeter of the rooms.

Floors are of asphalt tile or hardwood, with ceramic tile in bathrooms. Interior partitions are usually of gypsum wallboard, with plaster walls in bathrooms. In some houses, lath and plaster walls may be substituted. Windows are of casement, double-hung and awning types. All units have living room, dining area (sometimes combined), kitchen, bathroom, and two, three, and in some cases even four, bedrooms. Average unit cost of construction, including utilities, electric or gas range and a refrigerator, has been just over $16,000. Occupants supply their own laundry equipment.

By the end of fiscal year 1956 approximately 5400 units of family housing at a cost of $73 million had been started. Some 1284 units were programmed for FY 1957 at an estimated cost of $21 million. Of these 1284 units, 442 have been started, 387 have been put out for bids with award scheduled within 30 days and 455 are scheduled for award during the balance of the fiscal year.

Typical of the more recent, modified MCA-type construction are the 435 units being built at Fort Hood, Texas, the majority of which are for occupancy by enlisted personnel and their families. The design and layout represent a distinct departure from the conventional row-type housing built in 1949-50. Of modern, contemporary architecture, the project consists of duplex and single units with two and three bedrooms, some with a bath and a half. Built on concrete slabs, the units are for enlisted personnel up through general officers, with living areas ranging from 1068 to 2025 square feet. In addition, paved patios are provided. Brick, cypress, varicolored asbestos and western cedar used on exterior surfaces add to the individuality and home-like atmosphere.

TITLE VIII (CAPEHART) HOUSING

CURRENTLY, only a minimum number of family units are being constructed with MCA funds. Instead, major dependence is being placed upon a relatively recent measure—the National Housing Act as amended by Public Laws 345 and 1020—84th Congress.

With the enactment of Public Law 1020–84th Congress, the National Housing Act was amended to further broaden the Title VIII (Capehart) program. Among its major provisions:

Title VIII (Capehart) housing and mortgage insurance provisions are now extended to 30 June 1958, and apply to military installations in continental United States, Alaska, Hawaii, Puerto Rico, Guam,

Virgin Islands, Canal Zone and Midway Island.

Average mortgage limitation per family unit per project is increased from $13,500 (as originally authorized under Public Law 345) to $16,500. The latter figure includes costs of ranges, refrigerators, shades, screens and fixtures, roads, sidewalks, site improvements and outside utilities within the project boundary, costs of design and inspection, interest charges and related fees charged by non-Army agencies.

The legislation further provides that construction plans shall be based on the modular measure principle which will permit conventional construction, on-site fabrication, factory pre-cutting, or any combination of these.

Capehart housing involves no appropriated funds in its financing, except where required for utilities outside of the project boundary. It provides for the erection on military installations (or nearby) of units with an average cost not in excess of $16,500. Construction contracts are let by competitive bid and private capital is used where possible to finance the operation. Recently much of the long-term mortgage money has been obtained from the Federal National Mortgage Association. The Federal Housing Administration (FHA) is-

TITLE VIII (CAPEHART) HOUSING APPROVED FOR

Installation	*Units*
ALABAMA	
Fort McClellan	300 (100)*
Redstone Arsenal	670 (270)*
Fort Rucker	600*
ARIZONA	
Fort Huachuca	575*
Yuma Test Station	209
ARKANSAS	
Fort Chaffee	215
Pine Bluff Arsenal	34*
CALIFORNIA	
Benecia Arsenal	12
Camp Irwin	173
Fort Ord	1,089 (189)*
Two Rock Ranch	33
COLORADO	
Fort Carson	500*
Pueblo Ordnance Depot	20
Rocky Mountain Arsenal	20
GEORGIA	
Fort Benning	1,000*
Fort Gordon	480
Fort McPherson	107
Fort Stewart	388*
ILLINOIS	
Granite City Engineer Depot	65
Fort Sheridan	150
KANSAS	
Fort Leavenworth	300 (100)*
Fort Riley	433
KENTUCKY	
Fort Knox	2,042*
LOUISIANA	
Fort Polk	2,000
Bossier Base	200
MARYLAND	
Fort Detrick	63
Fort Meade	1,000
D/A Receiver Station (LaPlata)	12*
Fort Ritchie	70
MASSACHUSETTS	
Fort Banks	26
Fort Devens	450
Natick Quartermaster Research and Engineering Center	50
MICHIGAN	
Camp Lucas	73

*Under construction (9,152 units)

sues mortgage insurance representing 100 percent of the replacement cost, thereby eliminating the element of risk for the lender.

Upon completion of the project, the units become public quarters of the military department concerned which assumes the mortgage at an interest rate of 4 percent. This is amortized over a 25-year period by applying the quarters allowances of the personnel occupying the units.

Construction of approximately 26,000 family units on Army installations has been approved under the Capehart housing law to date. With a large part of these planned for commitment during the current fiscal year, this will be the largest number of Army housing units ever constructed within a like period. MCA housing will be programmed only where it is not feasible to provide housing under the Capehart program.

By 26 April 1957, the Department of Defense had reviewed favorably requests for approximately 26,000 units to be constructed for Army families. (*See below.*)

TO IMPLEMENT the Capehart plan, an installation commander, assisted by the Corps of Engineers District Engineer Office, normally initiates and develops a Title VIII project in coordination with the local FHA Director. If the latter con-

FOR CONSTRUCTION (AS OF 26 APRIL 1957)

Installation	*Units*
MISSOURI	
Fort Crowder Disciplinary Barracks	45
Fort Leonard Wood	1,329
NEW JERSEY	
Fort Dix	702
Fort Hancock	50
Fort Monmouth	240 (120)*
NEW MEXICO	
White Sands Proving Ground	209
Wingate Ordnance Depot	8
NEW YORK	
Fort Jay	238
Fort Tilden	48
Fort Totten	72
Fort Wadsworth	120
NORTH CAROLINA	
Fort Bragg	1,500*
PENNSYLVANIA	
New Cumberland General Depot	91
Philadelphia Quartermaster Depot	46
SOUTH CAROLINA	
Charleston Transportation Depot	12
Fort Jackson	300
TEXAS	
Fort Bliss	490
Killeen Base	125*
Medina Base	125
Beaumont Army Hospital	125
UTAH	
Dugway Proving Ground	100
VIRGINIA	
Fort Belvoir	618
Fort Eustis	600*
Fort Lee	650 (500)*
Richmond Quartermaster Depot	25*
Fort Story	150*
Vint Hill Farms Station	13
Fort Monroe	56
WASHINGTON	
Fort Lawton	66*
Fort Lewis	375
HAWAII	
Schofield Barracks	1,326
Fort Shafter	100
Tripler Army Hospital	150
ANTIAIRCRAFT AREAS	
Various Locations	2,047 (256)*
TOTAL	25,510

* Under construction (9,152 units)

ENLISTED QUARTERS, TWO AND THREE BEDROOM ROW HOUSES, EASTERN UNITED STATES.

firms the commander's estimate of need for the housing, the project is forwarded to the Department of the Army for review.

Final approval comes at Department of Defense level, where coordination is achieved between the Office of the Secretary of Defense and the Federal Housing Commissioner. Clearance for construction must be obtained from the Armed Services Committee of Congress.

Once an Army project has been approved, the work of preparing plans and specifications is undertaken by an architect-engineer whose services are procured by the Corps of Engineers. Housing must conform to minimum FHA requirements as well as military construction standards. While the project is under way, the Corps of Engineers supervises the construction.

WHERRY HOUSING

BETWEEN 1951 and 1956, approximately 22,200 Title VIII (Wherry) units, employing private capital, were erected for the Army.

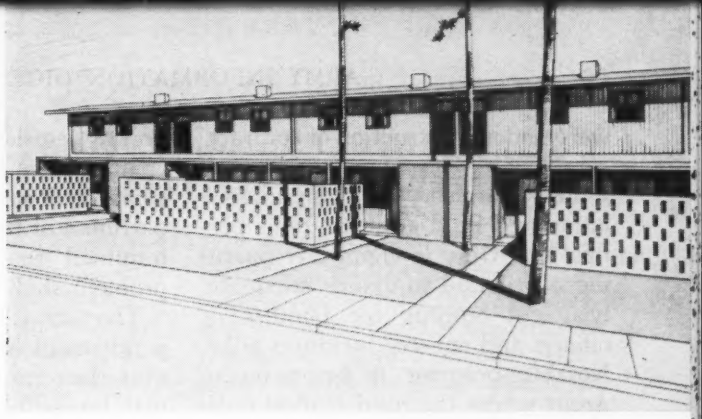
Wherry housing differs from Capehart in this important respect: Residents of Wherry housing simply pay rent to the private builders out of their normal housing allowances. The entire housing allowance of military personnel in Capehart units, however, goes to the Army to pay for amortization of mortgage indebtedness.

A cost limitation of approximately $9,000 was originally imposed upon the Wherry units. This figure proved inadequate in areas where construction costs were high, and as a result, the quality of the Wherry housing varies greatly in different parts of the country. Rentals are scaled to the type of unit—not to quarters allowance.

Public Law 1020–84th Congress which amended the National Housing Act, gives the Armed Services the option of purchasing existing Wherry housing, wherever located. At the same time, the law makes mandatory the acquisition of all Wherry housing at installations where new Capehart housing is to be constructed. Accordingly, negotiations are now under way to acquire Wherry projects at numerous installations in the United States.

OVERSEAS CONSTRUCTION

TO increase facilities for family housing in foreign areas where United States forces are stationed, another plan has been devised. This is the so-called Surplus Commodity Housing program undertaken in cooperation with the Commodity Credit Corporation (CCC), De-



SIX-FAMILY ROW HOUSE, PREFABRICATED TYPE, ENLISTED QUARTERS.

partment of Agriculture. Construction was originally authorized by Public Law 480–82nd Congress, modified by Title V of Public Law 161–84th Congress, approved 15 July 1955.

Under this plan, surplus commodities already acquired by the CCC are sold abroad for foreign currencies. From the proceeds, credits up to $250 million may be used for erection of family housing units to be occupied by dependents of military and civilian personnel who are authorized housing. Labor and materials are normally procured locally.

Progress on Surplus Commodity housing has been slowed by the necessity of entering into prolonged negotiatons in the countries where credits will be available. Thus far, programs have been approved for France, Italy and Japan. Construction is underway in Japan for approximately 500 units and award of a construction contract for some 1100 units is expected in France in the near future. Ultimately a total of 5,000 units are expected to be built overseas under this program.

Upon completion, the housing will be turned over for use of the United States Forces. The Department of the Army will repay the CCC for the surplus commodities furnished by turning over the rental allowances of the military personnel occupying the houses, less maintenance and utilities costs.

OTHER HOUSING

FAMILY housing both at home and abroad is procured by the Army under other legislative authority as well. In the United States, for example, privately owned units in the vicinity of tactical military installations may be leased from the owners. This method has particular application at or near Army antiaircraft sites, some of which may necessarily be located in high-cost areas. A limit of $150 per unit is imposed on rentals. As of mid-April, the Army has leased approximately 3,000 units.

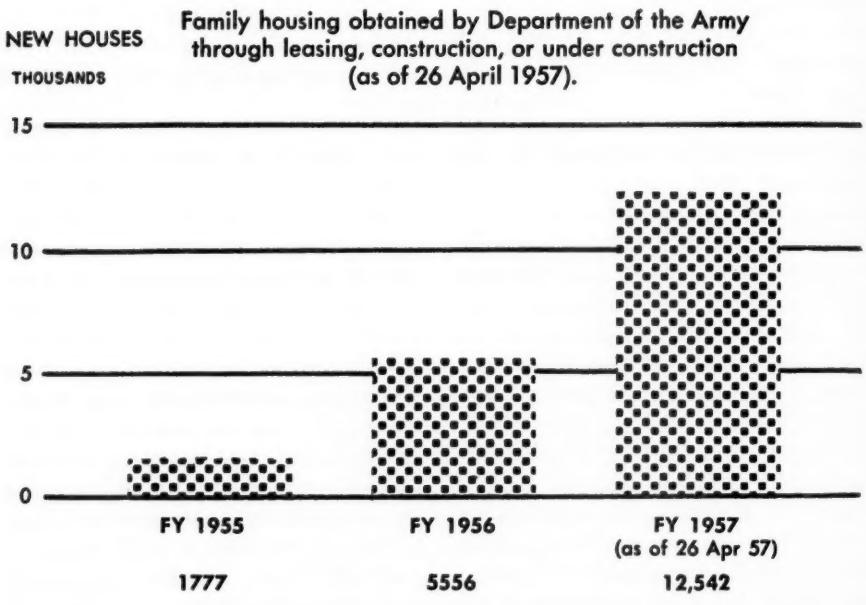
Public Law 574–84th Congress authorizes the Army to guarantee mortgages for construction of off-post family housing for key civilians at research and development installations. To date, the Army has authorized construction of 500 such houses in the vicinity of Redstone Arsenal, Alabama.

In France, rents for new units constructed by private enterprise are guaranteed by the U. S. Government for a period of from five to seven years. As of 31 December 1956, 1614 of these units were completed for Army use and 238 more

were under construction or contract.

THUS in every area where legislation and fund authorizations permit, the Army is vigorously pursuing a program to assure adequate, healthful housing for families of officers and enlisted members alike. Notable progress is being made. Areas where the need is most critical have been identified and supporting legislation has been passed. Commanders at every echelon, from field installation to the Department of the Army level, are determined that this long-standing problem shall be solved.

The time is indeed near when dependents of Army personnel—whatever their rank and wherever they may be—will have the decent, adequate housing which is their right.



" . . . the Army during the past two years has provided more housing than in all previous years combined, throughout its entire history."

INDEX AVAILABLE

AN INDEX to the 1956 issues of ARMY INFORMATION DIGEST has been prepared in matching format and is available to readers upon request. Address requests to Editor, Army Information Digest, Cameron Station, Alexandria, Virginia.

New Basic Infantry Weapon

ROUNDING OUT long-considered plans for an improved small arms weapons system, the U. S. Army has adopted a new standard rifle, the M-14, to replace four current shoulder weapons. Along with the recently adopted M60 General Purpose Machine Gun, the new system will provide forward infantry units with increased firepower while cutting the number of weapons used from seven to two—*i.e.*, the M60 machine gun and the T44 in a two-barrel version.

Eventually the new rifle will replace the standard M1 (Garand); the Browning automatic rifle, familiarly known since World War I as the BAR; the caliber .30 carbine; and the M3 submachine gun. At the same time, the new M60 machine gun will replace the heavy machine gun and two light machine guns now in use (see May 1957 DIGEST). Both new weapons use the 7.62mm (caliber .30) NATO cartridge, which will be common to the NATO allies.

Capable of either fully automatic or semi-automatic fire, the new rifle has two interchangeable barrels. When equipped with the light barrel, it will weigh 8.7 pounds and will be designated the M14. When equipped with the heavier barrel and a bipod, it will be known as the M15, and will weigh 13 pounds compared to the 20-pound BAR which it will replace.

THE new rifle was developed by the U. S. Army Ordnance Corps at the Springfield Armory, Massachusetts, which also produced the M1 or Garand, the Army's basic infantry weapon since early 1936.

During the testing period a limited quantity of T44s were manufactured. Volume production and issue to troops of the M14 and M15 is expected to begin in 1960.

The new infantry small arms system includes the M15 rifle (heavy barrel), the M14 rifle (light barrel) and the M60 general purpose machine gun

The Deputy Chief of Staff for Logistics outlines a broad range of polici

DEPARTMENT OF THE ARMY

OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS

WASHINGTON 25, D. C.

During the first half of the 20th Century, three great developments have profoundly affected the logistics of the U. S. Army. The first of these has been continuous increase in the variety and complexity of our military equipment. The second has been continuous increase in the variety and complexity of our military commitments overseas. The third has been the entry into a period of great scientific progress. The influence of these developments, both individually and collectively, presents problems which must be considered in every phase of the Army's logistics activity, both current and future.

To take advantage of the study and sound judgment put into the development of logistic policy by my predecessor in the Office of Deputy Chief of Staff for Logistics, General Williston B. Palmer, now Vice Chief of Staff, and to maintain continuity of effort along the lines selected by him, I did not endeavor last year to create a new policy statement of my own, but I have chosen rather to keep the Program of the Deputy Chief of Staff for Logistics an active form of guidance by eliminating each year such old objectives as have been accomplished and adding such new objectives as current developments indicate to be necessary.

The areas in which it has been found necessary to establish major objectives are: Plans, Logistics in Theaters of Operations, Military Aid Program, Supply Operations, Materiel, Facilities, Maintenance and Repair Parts, Transportation, Construction, Personnel Management, and Organization and Control.

Developments in these areas to date and policy guides for the future, as set forth here, serve a dual purpose--they indicate to those directly concerned with specific logistical problems how their tasks fit into the larger pattern, and they reveal to all those concerned with the Nation's security the gratifying extent of progress already achieved.

Carter B. Magruder

CARTER B. MAGRUDER
Lieutenant General, U. S. Army
Deputy Chief of Staff for Logistics

of policies and programs to serve as

GUIDELINES FOR ARMY LOGISTICIANS

LIEUTENANT GENERAL CARTER B. MAGRUDER
Deputy Chief of Staff for Logistics

War plans for both general and local war must reflect Army capabilities. Effective logistical support concepts must be provided.

Strategic plans capable of being supported logistically and designed to carry out the Army's mission under any given concept are essential as a guide to the attainment of required readiness.

Accordingly, three check lists must be maintained—of the actions which should be initiated in a period of strained relations, of actions which must be taken immediately subsequent to the commencement of a local war, and of actions to be taken immediately subsequent to the commencement of a general war. The Army must insure that by its current actions it eliminates the necessity of many emergency actions.

Logistical concepts must be based on agreed tactical concepts for defense and for offense in atomic war. Without this interrelationship, logistics planners cannot develop realistic requirements for combat equipment or for logistic troop units.

Logistic doctrine must be firmly established. In past years, efforts in this area have been sporadic. TOEs have been set up for major logistic units. Techniques of such units must be incorporated in appropriate Field Service and other manuals and in separate manuals

A SYNOPSIS OF UNCLASSIFIED PORTIONS OF THE "PROGRAM OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS"

where required. Specifically three Field Service Manuals will provide the basic logistics doctrine—namely, FM 100–10, "Field Service Regulations – Administration," FM 100–( ), "The Logistical Command" (being prepared); and FM 101–10, "Organization, Technical, and Logistical Data." Appropriate Technical Service manuals on reference data and technique of operation must be brought into consonance, as they are revised, with these three basic logistic manuals. These projects require continuing attention.

Establishment of TOE Logistical Commands is required in all appropriate oversea theaters as well as in the Strategic Reserve in the United States.

In discharging its responsibilities under the Military Assistance Program (MAP), the Army must determine what needs to be done to make the program most effective and then aggressively press for approval of its proposals.

The Army has developed and secured Department of Defense approval of a sound five-year MAP vehicle maintenance and replacement program. This must be followed with similar action on heavy engineer and signal equipment.

The functions of the MAAGs are primarily logistic, yet in the determination of their organization and the selection of their personnel, the accent has been primarily on strategy and tactics. The quality and numbers of logistic personnel in the MAAGs have been improved. *As a next step, the precedence of logistics must be established in the MAP field.*

REDUCTION IN VARIETY AND QUANTITY OF ITEMS

In the field of supply, a first objective is to reduce the number of things we attempt to supply.

In visualizing the tactical and logistical difficulties of atomic warfare, one thing stands out clearly. The Army cannot attempt to supply so many items of equipment which are nice to have but not essential to victory. The essential must not be strangled by the non-essential.

In 1952, ODCSLOG started a program to reduce the number of different line items in the supply system by cataloging, standardization, and elimination of obsolete items. This reduction was to be made despite the addition of many items required with new complex equipment. The Army had 1,500,000 items in 1952. This was brought down to 949,000 cataloged line items by 31 December 1955. During the calendar year 1956, however, the figure slipped back to 956,000. During calendar year 1956, 144,000 new items entered the system and 137,000 were deleted, making a net increase of 7,000. This has been caused, in part, by the rapid input of guided missile and aircraft parts without a corresponding rapid obsoletion of older conventional equipment. Increased efforts must continue to be made to reduce total line items by

obsoletion and standardization.

ODCSLOG is also seeking to remove from stockage at lower echelons those seldom-used items which, while they must remain in the system, still need only be stocked in United States depots or overseas base depots. To this end installation of the Army Field Stock Control System helps remove from station and unit stocks (in the United States) those items of supply which are in demand less than three times in six months. The installation of the Army Field Stock Control System at Class I installations commenced 1 July 1956. Tests to date have indicated that approximately half of the line items stocked at station level can be removed.

During 1956, pilot installations were established in all major zone of interior commands with some additional testing in Europe. As a result, the system has been approved for full implementation. Complete conversion at Army installations worldwide is expected by December 1957.

In addition to reducing the variety of items in supply, the quantity supplied and the quantity held in stock must be reduced.

Retention levels must be examined in the light of new plans, to rid shelves of unnecessary items. The Army must stop paying storage and maintenance on equipment for which no need is foreseen.

Use of direct deliveries from vendor to user continues to reduce the workload on the wholesale system. In dollar value, about 25 percent of all issues in 1956 bypassed the depots. Local procurement at post, camp and station level likewise helps prevent items of common, commercial nature from entering the supply system. During FY 1956, approximately 83 percent of the total number of Army procurement actions were taken at post, camp and station level, constituting 5 percent of the dollar awards.

Inventory management is improving by implementation of uniform supply control procedures.

Proof of the effectiveness of these measures is the continuing downward trend in excessive inventories in areas in which these systems have been installed. Along with reduction of inventories, stockage is being consolidated and realigned at locations where operating expenses and transportation costs are most favorable. The number of U. S. depots has been reduced from 73 on 1 July 1954 to 48 on 1 July 1956. A further reduction to 46 and possibly to 44 now appears justified.

Reasonably current duplicate inventory control records must be provided in alternate protected locations to permit continuity of supply action in emergencies. Safe storage or wide distribution of these data is essential to prevent loss of control in an atomic attack. It is planned to establish permanent alternates with full implementation scheduled by 1963.

The desirability of using Stock Funds below the level of Technical Service depots in CONUS and overseas must be determined, including their application under mobilization. Also, policy must be clarified governing the conditions under which items or categories of items are included in, or excluded from, the Stock Fund. The Army presently maintains Stock Funds for consumer type items in Technical

Service depots in CONUS and overseas commands. Stock Funds have been extended to selected posts, camps, and stations in Third Army on a test basis, and throughout CONUS for subsistence, medical and dental supply, and non-organizational type clothing and equipage.

The distribution system must be improved. Requisitions, particularly those from overseas, must be filled completely and on time. As a result of improved performance during 1956, the average fill of overseas requisitions on time has increased from 77 to 86 percent.

SUPPLY MANAGEMENT TRAINING

It is essential that the Army have within its school system, schools which give all necessary logistic training that cannot be obtained elsewhere. The 12-week Supply Management Course at Fort Lee was established in 1954 to fill a part of this need. It has now been expanded into the Army Logistics Management Center, activated in May 1956.

The Supply Management Course —an adaptation to Army needs of the course given to business executives at the Harvard School of Business Administration—will be continued as a senior course at the Center. Already it has graduated 514 senior personnel of the supply system—286 military and 228 civilian. Its objective is to reach annually 400 senior supply managers, of which there are some 1,500 military and 1,500 civilian.

The expansion includes establishment of four 8-week courses (Procurement Management, Requirements Management, Storage and Distribution, Maintenance Management) and one 5-week course (Property Disposal Management) designed to reach individuals holding middle managerial positions.

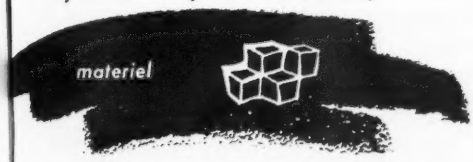
Logistics training is needed by the countries receiving assistance under MAP even more than it is needed by U. S. personnel. Accordingly, the Army Logistics Management Course is assisting in development of supply management training for personnel of countries in the Far East and Pacific Commands. A course is being taught in Korea; one will begin in Taiwan in early 1957; and the Japanese and Phillipine Armies have enrolled senior student officers in the Supply Management Course with the object of preparing for courses to open in their respective countries soon.

In addition, the Center is developing extension courses in logistics for Army reserve component officers (not on active duty) who are unable to attend courses there.

DEPOT MANAGEMENT

Quality of management at depots must be improved. In October 1954, ODCSLOG appointed a Task Force to develop an integrated programming, budgeting, accounting and reporting system for Army depots, financed to the maximum extent practicable by a single allotment. On 1 April 1955, a pilot system was installed at Letterkenny Ordnance Depot and Atlanta General Depot. This system, now designated the Command-Management System, provides for a minimum number of sources of funds and allotment funding documents, and permits considerable flexibility in carrying out the approved oper-

ating program. This system has been approved by the Department of Defense with a modification in the original plan which provides for the establishment of industrial funds for depot maintenance operations. The system was completely installed in the 48 depots in the United States effective 1 July 1956. It remains to determine the effectiveness of the system installed and to introduce such improvements as its actual operation justifies. (See "Depot Command-Management System," May 1957 DIGEST.)



COMPUTING REQUIREMENTS

The existing process of computing requirements has received a great deal of scrutiny but little basic change has been found necessary. A major problem in this area is not the methodology but the fact that requirements must vary according to the concepts of future war. These vary from the concept of massive retaliation in an ultra-short war to a conventional war of long duration. *ODCSLOG must assist in the development of a concept of a future war, so that there can be an acceptable basis for computing requirements.*

OBSOLESCENT EQUIPMENT

We must provide for the replacement of obsolescent equipment. Primarily as a result of obsolescence and depreciation caused by advances in technology or cumulative engineering changes, the dollar value of the Army's total inventory must be turned over or replaced on the average of every 14 years. As items such as guided missiles and aircraft are introduced, more rapid replacement is required since the technology of these items is advancing at a more rapid rate.

The existing modernization coding system must be utilized to the fullest to flag items two, three, or four years in advance. Accurate coding will assist in preventing the procurement of unnecessary repair parts; it will facilitate the lowering of maintenance standards of obsolescent equipment; and it will help eliminate the scheduled rebuild of such equipment. The combination will result in a balanced and economical phase-out of the item and its support.

In all activities there must be alertness to changing requirements resulting from changing plans. Money must be saved by ridding the system of items no longer needed in order to divert available funds to meet new requirements.

Most of the Army's money is going to procure new modern weapons with little left over to replace older weapons. As a result, stocks of many expensive items contain several models, some of varying degrees of obsolescence. *If the Army is to maintain itself ready to fight with the most modern equipment, it must utilize this older equipment for peacetime training.* Older equipment should be supplemented with enough of the newer equipment to familiarize troops with it. Sub-caliber ammunition and tubes should be used to the maximum extent feasible in training.

PRODUCT IMPROVEMENT

One of the Army's greatest diffi-

culties is the provision of technicians of adequate quality and in sufficient numbers to operate and maintain its complex equipment. An important method of attack on this problem, suggested by Dr. Ralph J. Cordiner, President of General Electric, has been the simplification of equipment so as to reduce the need for so many highly trained specialists as is now required. *Contracts must be let with the most competent commercial producers for product improvement that will simplify maintenance and operation of our most complex equipment.* A Product Improvement Branch is being established in the Materiel Maintenance Division to insure further progress toward simplification of operation and maintenance of equipment.

ELIMINATION OF MILITARY COMMERCIAL TYPE FACILITIES

To relieve the Army of unnecessary burdens, commercial-type military facilities should be eliminated when adequate civilian operated facilities are available. The Army has completed the review of 637 facilities out of 646 scheduled under the Department of Defense criteria oriented toward reducing commercial-type facilities operated by the military. Ninety-eight have been closed or are scheduled to close. Examples of these facilities are: automotive repair shops, shoe repair shops, scrap-metal baling plants, dry cleaning plants, bakeries and similar activities.

COMMERCIAL AND INDUSTRIAL TYPE FACILITIES

The Army should continue to improve its programming, budgeting, accounting, and manpower controls in commercial and industrial-type installations by continuing to expand the utilization of the Command-Management or Industrial Fund Systems.

The Command-Management and Industrial Fund Systems are utilized in the management of non-tactical installations and organizations. These systems, designed to strengthen the role of the installation commander, provide a coordinated basis for planning and forecasting workload and utilization of resources in relation to plans and forecast. An installation operating under the Command-Management System is financed directly from appropriations, while an installation operating under the Industrial Fund has working capital which is reimbursed from the appropriations of the agencies served by the installation. The logistic systems include manufacturing arsenals, rebuild shops, ports, hospitals, depots and research and development laboratories. As of 31 December 1956, 95 installations were operating under one or the other of these systems, and an additional 17 were to be covered during FY 1957.

RETENTION OF ARSENALS

As the Army's funds for procurement are reduced, it becomes more and more important to maintain in Army arsenals the knowledge and skills which will be rapidly lost in industry when there is little production for military purposes. *The*

Army must endeavor to keep its arsenals active in peacetime, equipped with the best quality multi-purpose tools and manned by highly trained career workmen, technicians and scientists. Quantity production is not a function of these arsenals and will be dropped except when commercial concerns are unwilling to undertake it, their prices are unreasonable, or where limited quantity production is considered essential to maintain skills and know-how. The primary purpose of the arsenals is to assist research and development of new items by producing experimental models and small quantities for engineering and troop tests with the end purpose of providing drawings and specifications for use in quantity production by industry.

With the change in emphasis from conventional armament to guided missiles and tactical atomic delivery systems, there should be less production of conventional equipment in the future. The arsenals therefore must not continue to maintain the same number of personnel that have specialized in areas peculiar to conventional equipment that is fading out through obsolescence, but must continually study and readjust their missions to remain abreast of advancing technologies and concepts.

INDUSTRIAL MOBILIZATION

With the development of a thermonuclear capability by other nations, the importance of being able to retaliate immediately in kind, in case of a surprise atomic attack on this country, has greatly increased. Emphasis must therefore be placed on the maintenance of ready reserve stocks of both nuclear and certain conventional weapons and less on maintaining standby production facilities. This requires that the Army's mobilization production base be reassessed.

As of June 1956, the Army's production base contained 315,000 pieces of production equipment with 27 percent of these laid away in production line positions ready to go on short notice, 24 percent stored in contractors' plants or in central storage, and the remaining 49 percent still in production use.

In laying away Army-owned production lines and equipment when no longer needed for peacetime procurement, the Army must insure that it retains only what is needed for mobilization. Items now capable of production may become obsolete or the mobilization need for these items may change as concepts of war change. The equipment itself may become obsolete.

ODCSLOG policy on the
MOBILIZATION PRODUCTION BASE:

First, endeavor to keep in operation in peacetime those plants which are required to keep the peacetime force equipped with the most important modern weapons by applying product improvements whenever advances of sufficient magnitude justify them. Keep these facilities operating, at least, at the minimum economical rate.

Second, seek to guarantee in an atomic war continuous production of weapons of survival. Dispersal of production facilities will assist in meeting this objective.

Third, maintain a production base reasonably adequate to provide conventional equipment for a small war. Establish additional facilities only for new important items or where greatly improved methods of producing important items have been developed.

The Army must not waste funds on obsolescent materiel.

Also seriously questioned is the desirability of laying away any facility in a critical target area. When the Army does lay away production lines, it must practice economy, consistent with reactivation readiness, in selecting storage locations, in methods of storing and preserving the lines in good condition. There must be continued review of requirements for mobilization as well as inspection of reserves to insure that obsolete and non-essential items are disposed of, and that improvements in maintenance management are being utilized to eliminate deterioration and unwarranted costs.

REDUCING REPAIR PARTS

In the field of maintenance of equipment the Army must continue to reduce the number of items of repair parts it tries to distribute.

Parts inventory has been reduced from an estimated $6 billion on 1 July 1952 to $4.3 billion on 30 September 1956, against a retention criteria of $2.6 billion. $1.2 billion of repair parts inventory is excess and will be disposed of. On 1 July 1952 the Army had an estimated 900,000 separate items of repair parts. As of 1 September 1954, this had dropped to 646,000. The net quantity objective as of 30 September 1956 was approximately 580,000 line items of repair parts.

During FY 57, the Army pressed vigorously for the elimination from the active Army of the World War II special-purpose vehicles still in service. Other obsolescent items must be eliminated from the system when the utility of the item does not justify the cost of maintenance (which includes cost of procurement, storage and issue of repair parts).

REDUCING DELIVERY TIME

The long requisition time from overseas must be greatly reduced, and movement of repair parts must be expedited all along the line with particular emphasis on those parts required for equipment out of commission.

In a field test designated the Modern Army Supply System (MASS) which commenced 1 July 1956 with the Seventh Army in Europe, ODCSLOG is testing supply procedures which give promise of substantial improvement (See "Modern Army Supply System," April 1957 DIGEST.)

The success so far obtained with this system has justified its expansion in 1957 to include the Communications Zone, USAREUR.

STANDARDIZATION

Standardization must continue to be emphasized generally including standardization where the Army must procure several makes and models of equipment.

The Army is plagued by the variety of repair parts items required to repair the many makes and models of commercial-type Engineer, office, materials handling equipment, and the like.

Standardization of commercial-type items by area will permit reduction of inventories to those re-

pair parts which are required to support overseas equipment while at the same time taking advantage of the production capability of small producers. The number of makes and models of particular types must be reduced to one, two, or three per theater, rather than twenty or more, as is now the case for some items. The makes so chosen should be those of producers who can be reasonably expected to meet quantitative requirements of the future. Makes and models acquired in small lots can be used for training within the United States. These can be acquired direct from the producers without stockage in depots. Parts items in stock can then be reduced to those required for the models overseas.

SOME progress has been made in reducing the number of makes and models through area standardization for overseas theaters. As of 1 August 1956, the Corps of Engineers had completely redistributed the 10 major items originally selected for area standardization in all overseas theaters (cranes, tractors, generators, graders and compressors). Redistribution of an additional 31 items has been completed in overseas theaters, resulting in the withdrawal of 276 makes and models. In addition, another 33 Engineer items have been approved for area standardization and a program of redistribution is being initiated. The Quartermaster General has completed an area plan for standardization of materials handling equipment which will result in having only two makes and models of required types of equipment in each overseas theater.

ASSISTING PRODUCERS

Full use must be made of the capabilities of producers to assist in training, in planning and providing tools and test equipment, in preparing manuals and in actual maintenance during the introduction of new equipment. Primary problem in this area has been to interest the manufacturer in these auxiliary services which usually are considered minor. The Army must encourage the realization that a producer's responsibility does not end with delivery of equipment.

MAINTENANCE RESPONSIBILITY

A better job must be done in correlating the maintenance mission to be performed by using troop units with the parts, tools, publications and skills provided to these units. In April 1955, an Army Maintenance Board was established at Fort Knox, as a field agency of the Deputy Chief of Staff for Logistics. This board has the mission of relating the maintenance job of the user with the support received from maintenance units and the Technical Services. The Board has completed studies on Nike and Corporal missiles in an effort to eliminate duplication between missile units and supporting Ordnance maintenance units. In coordination with CONARC and the supplying Technical Services, the Board is establishing a realistic maintenance program for tank and automotive materiel. Similar maintenance programs must be established for other critical equipment.

REBUILD

Equipment must be rebuilt only when it is economical to do so and

when the item is not obsolescent. The Army must not accept for rebuild equipment which is approaching obsolescence, nor should it accept for rebuild, equipment that needs only repair or replacement of assemblies or equipment that should be cannibalized and scrapped. Limiting criteria must be established for specific end-items to insure that some components will not be rebuilt or some time-consuming and costly operations will not be performed.

AIR TRANSPORTATION

In the field of transportation the objectives are to prepare for the transportation difficulties of atomic war, exploiting fully the transportation possibilities of aircraft.

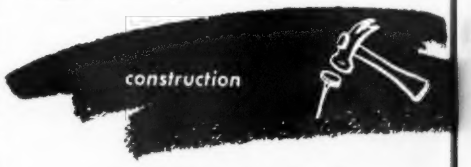
While recognizing limitations of capacity and considering cost, the Army intends to seize every advantage to be gained by air movement of personnel and cargo. Shipping personnel overseas by air cuts two weeks off the pipeline. Cargo shipments by air cut pipeline time and speed deliveries.

Army forces must be equipped with air transportation that can operate in the combat zone in spite of enemy ground-to-air missiles. Heavy helicopters appear to be one of the best answers now available. In addition, the Army must seek the development of cargo planes with short take-off and landing characteristics, capable of operating from open fields or, at least, from hastily prepared divisional type airstrips. The Army must have such aircraft in quantity.

OCEANBORNE SHIPPING

For overseas support, primary reliance will still have to be placed on oceanborne shipping, and the Army must be prepared to use it effectively even if the established ports are destroyed. If major ports in the United States are destroyed, the recently formed Transportation Terminal Commands for the Atlantic, Gulf and Pacific areas, when relocated, will be able to control and redirect cargo and personnel to minor ports with a minimum loss in efficiency. (See "Terminal Command Concept," January 1957 DIGEST.)

To prepare for dispersion of shipping in European ports to avoid making worthwhile atomic targets, exercises in the rapid discharge of cargo over the beach have been in progress on the coast of France for the past three years, testing organization, cargo-handling equipment and containerization. To reduce the time that vessels must remain in the discharge area, the Army is now testing "roll-on-roll-off" cargo ships to transport cargo on vehicles.



PERMANENT PLANT

To retain the qualified officers, NCO's and specialists required by a modern Army, the Army must provide troops, bachelor officer and family quarters of good quality.

During FY 1956, construction was completed on 41,936 permanent barracks spaces and construc-

tion began on an additional 16,781 spaces. During FY 1957, construction starts were scheduled on 10,069 permanent spaces. In FY 1958 and future years, annual construction starts of at least 14,600 spaces in permanent enlisted men's barracks are considered necessary to meet the Army's 20-year Permanent Plant Construction Program goal of 460,000 spaces by FY 1974.

In the important area of providing adequate permanent Bachelor Officer Quarters, construction was completed on 1686 spaces in FY 1956, and construction was initiated on 445 spaces. In FY 1957, construction starts on 495 permanent spaces were scheduled. To reach the goal of 13,400 spaces by FY 1974, an annual increment of at least 360 spaces is required in FY 1958 and future years.

Provision of adequate family housing is of utmost importance to the Army. To accomplish this, three major sources are utilized: Military Construction, Army (MCA), Title VIII (Capehart) in Continental United States and Territories, and the Surplus Commodity Program in Temporary Base Rights Area. (See "Family Housing for the Army," page 14.)

FACILITIES MAINTENANCE

Major commanders must be provided with specific program guidance concerning their facilities maintenance activities to ensure effective utilization of available resources for the accomplishment of the Department of the Army facilities maintenance objectives. Maintenance and Operations funds for support of facilities maintenance are now included in the mission funds of the commands. Facilities maintenance can be influenced but not controlled through funding channels. Department of the Army influence over facilities maintenance must be exercised through specific guidance which establishes standards and priorities of maintenance; staff visits; technical inspections; Inspector General inspections; the utilization of information in reports, including reports of expenditures; and by education.

REAL PROPERTY MANAGEMENT

In the field of real property management, the Army must continue to press for economical and effective maintenance, with special emphasis on: holding to a minimum alterations, extensions and minor construction; effective utilization of structures, including closing of those which cannot be utilized fully; and reduction to a minimum of new acquisitions, including those from the public domain.

In this field, the objective is to improve the whole system of developing and assigning logistical managers.

ODCSLOG must insure that officers who are placed in general charge of logistical operations (such as G-4's and logistical commanders) are professionally qualified for their assignments.

To improve the supply of such officers, a Logistics Officer Program has been established for selected officers of the Technical Services and of the Combat Arms.

When fully operational, the program will have perhaps 1,000 officers. As of 15 January 1957, 576 officers had entered the program.

After entry into the logistics program, officers retain qualification in their own branch of the service by alternating between logistical and branch assignments. As now constituted, a logistics career offers exceptional opportunities for difficult but interesting assignments, for attendance at advanced schools, for promotion and for ever-increasing responsibility.

LOGISTICS TRAINING

Quality of the logistics courses in all Army Schools must be improved. At present the best trained logisticians are those who have had a full tour of duty in the Office of the Deputy Chief of Staff for Logistics and who have had a variety of assignments within that office, although a good deal of logistics is learned in a G-4 assignment in an overseas theater command. Our schools must help, particularly in indoctrinating officers with the following basic conceptions of modern logistics:

CIVILIAN PERSONNEL

In continental United States, over two-thirds of all Department of Army civilian employees work for the Chiefs of the Technical Services. Civilians comprise approximately 85 percent of the personnel working under the Chiefs of the Technical Services.

It is obvious that the successful discharge of the Army's logistical responsibility depends heavily on civilian personnel. Actions must be continued to improve the career pattern of these civilian employees. In February 1956 a Civilian Career Management Program was initiated. In March, a referral system was started which provides opportunity for civilians occupying the upper grades in the offices of the Chiefs of the Technical Services and ODCSLOG to be promoted to position vacancies which occur in any of these offices. Since the start of the system, 81 percent of the vacancies filled in the Technical Services and ODCSLOG were filled from within the logistics area. This program will be expanded so that promising men and women working in the field have attractive

FOUR BASIC CONCEPTIONS OF MODERN LOGISTICS

1) That securing the most national defense for the funds that the nation can afford to expend for military purposes requires that initial cost and ease of maintenance be considered along with other important military characteristics in selecting equipment for the Army.

2) That if we are to have most of the equipment essential to combat, we must be willing to do without some of the items it would be nice to have.

3) That strategy does not consist only in selecting courses of action directed at forces or resources vital to the enemy, but also in determining that our own forces, committed to such a course of action, can put forth the effort required for success because they can be supported logistically.

4) That execution lies not so much in moving troops to a favorable battlefield as in maintaining them there.

career ladders leading upward to the staffs of the Chiefs of Technical Services, ODCSLOG and to the higher levels of the Department of the Army and Department of Defense. (See "Civilian Career Structure," May 1957 DIGEST.)

Forty-three separate career fields have been identified by the Technical Services. Programs for 13 of these are in complete operation in some of the Technical Services; 15 are in partial operation with full-scale implementation planned by 30 June 1957. The remaining 15 fields are planned for installation by 31 December 1957. These career programs are being extended to achieve logistics-wide application wherever appropriate. Increased emphasis has been given to training of civilian employees—scientists, engineers, management personnel—by contract with colleges and universities. Currently there are 44 cooperative programs with 40 colleges and universities covering more than 700 student trainees.

MANPOWER UTILIZATION

The downward trend in manpower authorizations makes it vital to increase efficiency in the use of personnel. *Any distribution of manpower reductions must be based on an assessment of the relative priority of programs.* A close relationship also must be established between manpower ceilings and fund resources to assure full utilization of both.

Within reduced manpower ceilings, the Technical Services are providing personnel support for expanded missile work, Army aviation, single managerships and other high priority missions. On the other hand, personnel support of lower priority programs is being reduced, particularly those pertaining to conventional weapons and equipment.

Approximately 100 manpower surveys per year, conducted or supervised by ODCSLOG, contribute to the manpower economies which are being effected. Manpower programming for logistical activities must be made an integral part of the Army Program System.

RESERVE OFFICERS

There must be instituted for logistical Reserve officers a career management system comparable to that being developed for Regular officers. Provision has been made for selected Logistic Mobilization Designees to take their 15-day active duty at the Army Logistic Management Center. In addition the Center is preparing extension courses to assist in filling the gaps in the training of reserve personnel. A program to provide for selection and career guidance of these officers is near completion.

In the field of organization and control, the objective is to integrate and give pattern to the system of seven Technical Services while recognizing that each has a primary function which is reasonably distinct from all others.

There is nothing unsound in having seven different Technical Services. No radical change is contem-

plated which would destroy the Technical Service pattern. The objective is to make their systems uniform where uniformity will pay dividends, not to impose uniformity for its own sake.

One broad objective is to use general depots throughout the Army logistical system where possible. The efficient management of these depots requires uniformity of systems. The combat forces, who are the customers, require uniform systems of supply and maintenance by the Technical Services to simplify their problems. From a management point of view, each higher command, whether overseas or in the United States, must receive from the systems information that permits comparison and consolidation. Such types of information can be generated only if the systems of the seven Technical Services are uniform in these areas.

Always the possibility must be considered that an atomic attack on the United States or the acute threat of such an attack may require that logistical activities go into a regional method of organization. Some uniformity of system will facilitate such decentralization. The first step toward regional organization of the Technical Services has been the establishment of the Transportation Terminal Commands.

As of 1 July 1956, a uniform system of accounting and reporting was installed in all Technical Service Divisions. It facilitates rapid and valid consolidation of reports at Department of the Army level and permits appropriate analysis. Due to peculiarities of certain commodity groups, minor variations in reporting are allowed, but these slight differences do not impair uniform handling and consolidation.

A greater uniformity of organization pattern between the Office of the Deputy Chief of Staff for Logistics and those of the Chiefs of the Technical Services will come along naturally as uniform systems are established in the field. There is no reason to force the issue merely to make organizational charts look alike.

On the other hand, the Army's Technical Services are essentially seven different professions. The ability of the Chief of a Technical Service to insure the professional competence of his officers and to guide their careers rests heavily on his command authority over Technical Service Schools and his authority to exercise career management over his personnel.

BALANCE

Economy in peacetime is not an end in itself but a means of getting the most preparedness from that part of the Nation's resources that can be devoted to military purposes. The information which is developed to permit more adequate control in peacetime will provide information for more effective control in wartime. Knowledge of inventories, lower stockages, elimination of non-essential items, rapid data transmission are all measures which permit a logistics manager to do his job more effectively. *In all planning, our concern must be primarily directed towards avoiding an excessive and restrictive degree of control that burdens subordinate echelons with reports and robs them of initiative and authority.*

Resuscitator for Field Use

AN ARTIFICIAL RESPIRATION device that can be used to treat nerve-gas casualties—as well as victims of drownings, shocks, suffocation and similar accidents—is being developed by the Army Chemical Corps in collaboration with the Surgeon General of the Army.

Labeled the mask-to-mask resuscitator, it is the first device that would permit artificial respiration in contaminated air. It utilizes the power developed by the breathing of the medical aid man to supply purified air to the stricken person's lungs. Early experiments show that it outperforms the older manual form of artificial respiration devices.

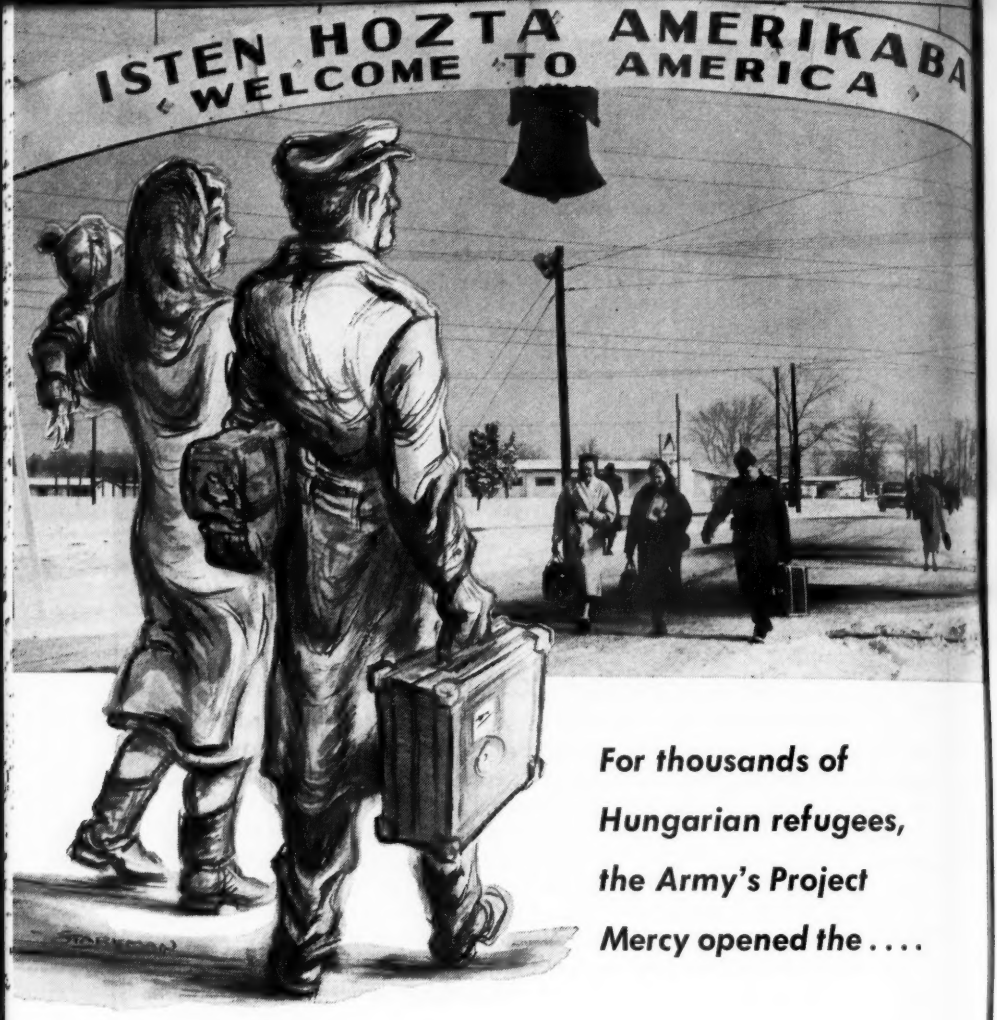
By substituting a mouthpiece for the mask and removing the canister, the resuscitator is adaptable for use in normal atmospheric conditions where artificial respiration is necessary.

THE NEW DEVICE consists of two hose assemblies joined by a rubber connector to an anesthetist-type mask, a modified standard Army field protective mask connected to the end of one hose assembly, and a standard gas mask canister connected to the other.

By inhaling purified air through the gas mask canister, the operator causes the entire hose to fill with purified air. When he exhales, he forces the purified air from the hose into the patient's lungs through the mask pressed firmly against the patient's face. When the operator inhales, the patient exhales as reverse pressure is applied.

Experiments have also demonstrated that artificial respiration can be given while a casualty is being carried on a stretcher, through use of a tube connecting the trachea (that is, by inserting a tube into the actual windpipe) with the mask-to-mask resuscitator. Such treatment is not possible with standard rescue and resuscitation methods.

Clinical studies that opened the way for this new protective measure were conducted at various university laboratories throughout the country in conjunction with Army scientists.



For thousands of Hungarian refugees, the Army's Project Mercy opened the ....

Give me your tired, your poor,
Your huddled masses yearning to breathe free,
The wretched refuse of your teeming shore.
Send these the homeless, tempest-tost to me,
I lift my lamp beside the golden door!
From a poem by Emma Lazarus,
inscribed on the base of the Statue of Liberty

Isten Hozta: "God Has Sent You"
Inscription over the main gate of the
Joyce Kilmer Reception Center, New Jersey

GATEWAY TO FREEDOM

Lieutenant General Thomas W. Herren

ON THE fourth of November 1956, the Free World stood helpless as it watched the Russian Army move to stamp out the brilliant flame of the Hungarian revolt.

Thousands of Hungarian patriots –convinced that further struggle against the might of Russian brutality was hopeless–streamed towards the haven of the West in a mass exodus.

The plight of neighboring Austria soon became apparent. Multitudes of escaped Hungarians flooded the unprepared and ill-equipped Austrian villages along the border. Many of the escapees had come with little more than the clothing on their backs and the determination to escape further Soviet domination.

The world outside the Iron Curtain rallied to their aid in the cause of freedom and decency. The United States, in keeping with its national tradition and heritage, quickly opened its doors to receive its share of the freedom fighters.

EVEN while this was being done, complex problems had to be solved. Most of the Hungarians would not be able to speak English. None was prepared for the rapid turn of events which would bring them to America's shores. Homes and jobs would have to be found. Government and private agencies would have to complete necessary processing to permit the unprecedented influx of these desperate people.

A site that could handle such a large group would have to be near a United States port of entry. The refugees, it was foreseen, would need a great amount of help in adjusting to their new way of life. The selected site therefore should be near a maximum number of experienced charitable agencies able to extend that help.

Events moved swiftly. On 12 November 1956, the Department of the Army notified First United States Army Headquarters that the Joyce Kilmer Reception Center at New Brunswick, New Jersey, would be used. The Center had been closed since the end of the Korean crisis.

Camp Kilmer was an obvious, logical choice. It is reasonably close to the port of New York with its great land, sea and air transport facilities. Most of the charitable and religious agencies of the United States have headquarters in New York. The area immediately around Kilmer is made up, to a large degree, of people of Hungarian descent.

LIEUTENANT GENERAL THOMAS W. HERREN is Commanding General, Headquarters, First United States Army, Governors Island, New York.

Vice-President Richard M. Nixon greets some young arrivals at Camp Kilmer.

First Army was given the responsibility of operating the installation that was to become the focal point of "Project Mercy." The camp was to be ready to receive the first group of refugees as early as 19 November.

Problems had to be solved on the spot. All energies were focused on the immediate challenge of breathing life into a post which had been inactivated 17 months previously.

Early on 13 November, First Army began its part of the operation. Camp Kilmer had to be made as livable as possible for 500 refugees expected in six days. Furthermore, it was likely that larger groups of Hungarians would arrive after that date. Those arriving were no ordinary group of people. Their efforts and deeds were a symbol to the Free World, and First Army wanted to give them a reception in keeping with American tradition.

THE small caretaking detachment at Kilmer was reinforced that same day with 250 skilled specialists mustered from all over First Army area. These were later augmented by additional personnel from other Army areas. In the six hectic remaining days, most of them worked eighteen hours daily without complaint or protest. They worked in cold buildings, ate in cold mess halls which were kept open 24 hours a day while the work went relentlessly forward.

Billets had to be made livable by repairing heating, water and electrical facilities. There were buildings to be brightened with new paint and curtains; bedding, furniture and food to be moved in by truck loads. There was a big job to be done but everyone cheerfully accepted the responsibility. Before the first refugee plane touched ground in the United States, 68 buildings had been readied for the Hungarians.

From the outset, First Army's mission was to provide food, shelter, housing, medical care and transportation to the Center and recreational facilities and spiritual welfare to the refugees. In addition, it set up facilities for the various governmental, religious and charitable organizations.

Still another vital task confronted First Army. The Free World and the American people particularly were vitally interested in the plight of the Hungarian refugees, and the extent of their progress and adjustment in the United States. To insure that the Nation knew as much as possible about Project Mercy, facilities were readied for press, radio and television agencies.

On 15 November, Presidential Press Secretary James Hagerty announced to the American people that 5,000 Hungarians who could

qualify for visas would come to the United States. Subsequently, this number was increased to far greater proportions.

Immediately after the announcement, calls poured in to Kilmer offering food, clothing, jobs, homes, Thanksgiving and Christmas dinners to Hungarian families. The facilities of the refugee center were deluged with offers of help by generous Americans. The situation had touched the heart of America.

On the same day, Brig. Gen. Sidney C. Wooten assumed command of the Center and personally directed operations throughout the initial and later difficult periods.

The first Hungarian refugees arrived at McGuire Air Force Base on 21 November. By this time, more than 700 military personnel were hard at work, placing the Kilmer refugee center in readiness.

After a welcoming ceremony, the refugees were moved by Army buses to Kilmer. The roadway to the gate was lined with thousands of Americans of Hungarian descent, waving a welcome to their new compatriots. Many stood with tears in their eyes as the First Army band played the Hungarian national anthem.

A Civil Affairs-Military Government platoon initially, and later the entire 41st CAMG Company, assisted the governmental agencies in the complex processing procedures.

IMMEDIATELY upon arrival at Kilmer, the refugees went directly from their buses into processing by governmental agencies. The U. S. Public Health Service checked them for contagious diseases. Depending on the time of arrival, this check was followed with a hot meal served by soldiers and prepared by Army cooks. Each of the refugees then passed through customs for the normal property declarations and baggage checks. Immigration authorities then checked their papers and prepared the necessary forms to enter the United States.

CAMG personnel and a signal photo platoon prepared identification cards and immigrant record cards for each of the refugees. Each group was then moved with their baggage to temporary billets. Normally, one building housed a plane-load or refugees.

Next the American Red Cross took the group to the clothing warehouse where individual clothing needs were filled from donations made by Americans. The group then returned to its temporary quarters, where they were available for placement interviews by the private agency sponsoring them. Refugees normally remained

Their first Thanksgiving in their new land was meaningful to the refugees.

This group of Hungarians arrived at McGuire Air Force Base in President Eisenhower's plane, the "Columbine," to start life anew.

in the temporary area 72 hours, pending their resettlement at various localities in the United States.

FIRST ARMY did everything possible to make the Hungarians' introduction to America attractive. Families were kept together. Recreation areas and crafts shops were operated. Churches were opened so that the Hungarians might practice their first free worship in years. Movies were shown several times daily; television sets were made available; and every effort was made to permit the Hungarians the greatest possible freedom. As soon as the processing was complete, they were able to leave Kilmer to visit friends or to travel to the New York area to get a glimpse of their new homeland.

The Army added its own medical check to the processing. Although this was not required, it proved to be a valuable addition. One Hungarian woman, wounded during the revolt in her homeland, was treated for the first time by Army doctors. Several cases of tuberculosis were detected and hospitalized by the Army medical teams. Special baby formulas were prepared.

THE good will and energy of all who contributed and labored in Project Mercy were repaid many times over by the grateful Hungarians. Some typical scenes:

A hollow-eyed, 14-year-old Hungarian girl sitting down to her first meal in America, looked up at the soldier who was serving her and said, "It is too much. I have never had so much food!"

A Hungarian-speaking interpreter played the folk tunes of his native land on an accordion to a small audience, rapt with attention, their eyes tear-filled.

A young mother who had given birth to her child before her ship docked in the United States, studied an English-Hungarian dictionary intently, trying to learn the language of her newly adopted country.

As another sidelight, Army cooks found that little or no milk was being consumed by the Hungarians. Then the reason was discovered—the newcomers didn't know how to open the cardboard containers.

IN early December, President Eisenhower appointed Tracy S. Voorhees as Chairman of the President's Committee for Hungarian Refugee Relief. Its purpose—to coordinate and assist the activities of all governmental and private agencies involved in refugee processing.

Leo C. Beebe, vice-chairman of the committee, was placed in charge of the Center. With presidential authority, he was able to coordinate the work of the various agencies so that many tasks were united under one control. The committee also devised a job interview system using data processing machines which sped the work of the private agencies in locating refugees in their future homes.

By January 1957, First Army could look back on its part of Project Mercy with pride. It had helped nearly 20,000 new Americans enter a new way of life with a minimum of discomfort in a little less than six weeks.

Within a week after the first plane-load of Hungarians arrived in the United States, initial processing time had been reduced to 55 minutes—a record of sorts, as any overseas traveler can attest.

At the peak, some 3,631 military and 472 civilian specialists were joined in the operation.

TAKING note of the success of Project Mercy, President Eisenhower stated on 1 January:

> "Many times since the task of caring for the Hungarian refugees began, I have had reports about the really fine job the Army is doing in carrying out its part. The latest reports have come from the Vice-President and Tracy Voorhees.
>
> "The favorable comment has to do not only with the efficiency and cooperation that have been demonstrated in making ready to house the large numbers of refugees comfortably, give them excellent food, and provide medical care to them but also—what I particularly commend—with the warmth of spirit with which all this is carried out."

MEMBERS of the Army share the high tribute from the President with their partners in the governmental services and the religious or charitable agencies who contributed so much. They, plus the unselfish American families who sponsored the refugees in their new found life somewhere in Hometown, U.S.A., can always remember with pride the historic link which was forged between the freedom-aspiring people of Hungary and the United States.

THE U.S. ARMY—A KEY TO PEACE

What's New in

Training AIDs

Keep your organization current with the latest training materials by referring to this section in each issue.

TRAINING LITERATURE

While the following new literature will be published shortly, units are cautioned *NOT* to requisition copies until receipt of automatic initial distribution or the items are listed in DA Pamphlets 310–3 or 310–4.

Civil Affairs Military Government Operations. This new manual (FM 41–10)—intended for use in conjunction with FM's 27–5 and 41–15—is generally applicable to combat or anticipated combat situations and contains techniques and procedures employed by CAMG staff sections and units.

TRAINING AIDS

Training Films recently released for distribution:

Helicopter Inspection, Maintenance, and Training. The following series of training films have recently been released:

TF 46–2381, Basic Helicopter Flight Training—Part I—Pilot's Pre-Flight Inspection.

TF 46–2382, Primary Helicopter Flight Training—Part II—Primary Flight Maneuvers.

TF 46–2338, Helicopter Post Flight Inspection—The H–34.

TF 55–2310, Helicopter Maintenance —Part III—Introduction to Power Trains.

Prisoners of War. MF 19–8699 presents an on-the-spot portrayal of Military Police techniques and procedures in handling prisoners of war in Korea in accordance with the humane principles of the Geneva Convention of 1949.

ARMY EXTENSION COURSES

The following subcourses have been approved for publication by Headquarters, United States Continental Army Command and are either new subcourses or major revisions:

The Army Replacement System, Subcourse 94. The Adjutant General's School. History of the replacement system; theater Army replacement command; the division replacement company.

A Comparative Study of National Power, Subcourse 34. The Chaplain School. A discussion of the theory and practice of Communism; areas of tension between Communism and democracy which create religious and moral problems in the minds of military personnel; achievements and potentialities of the United Nations.

Financial Management Plan, Subcourse 40. U. S. Army Finance School. A study of the background, purposes, scope and elements of the Army Financial Management Plan and its relationship to the Army Program System.

Nike I System, Subcourse 133. Ordnance School. Familiarization with Nike I System including physical characteristics, control systems, propulsion system, booster and warhead system, launching equipment, guidance unit, acquisition radar, tracking radars, and computer.

Signal Communications in the Theater of Operations (Planning and Organization), Subcourse 69. U. S. Army Signal School. Principles of communication planning, coordination, and supervision at the theater level; problems of organization and planning in specific situations involving signal sections of the major headquarters in the theater; organization of signal units in the theater.

Armored Division Operations—III, Subcourse 25. Command and General Staff College. Fundamental techniques employed by the armored division acting as a covering force in a defensive situation, protecting the organization of a defensive position by the balance of a corps. Necessity for accurate and timely information is stressed. Also covers fundamentals and techniques employed by an armored division in continuing a corps attack, including execution of mobile defense by the armored division. Planning for and use of atomic weapons is included as well as defensive measures against atomic attack.

PARAGRAPHS
from
The Pentagon and the Field

Marking a historic milestone in development of peaceful uses of the atom, the Army's first nuclear power reactor was officially dedicated on 29 April by Secretary of the Army Wilber M. Brucker and Atomic Energy Commission Chairman Lewis L. Strauss in ceremonies at the Engineer Research and Development Laboratories, Fort Belvoir, Virginia. The new air-transportable Army Package Power Reactor utilizes atomic energy to provide light and heat at remote installations.

The U. S. Army Field Band, of Fort Meade, Maryland, currently on a 10-week goodwill tour of Europe, will give an estimated 70 concerts in 12 countries and 44 major cities. The band, now touring Europe by bus, last visited Europe in 1952 and played before some 1,500,000 persons on that tour.

A powerful new short wave transmitter which can beam vital defense messages to any spot on earth, even through severe interference, has been developed for use as part of the Army's world-wide communication network by the U. S. Army Signal Engineering Laboratories at Fort Monmouth, New Jersey, and by Continental Electronics, Inc., of Dallas, Texas. Called the World Spanner, the big set—to be installed in the Pentagon—is almost 50 times more effective than the loudest commercial broadcasting station.

Officers released from active duty henceforth will not receive automatic appointment in a top enlisted grade upon enlistment in the service. An officer or warrant officer with no former enlisted status may make application no earlier than 120 days prior to release date for a grade determination if he desires to enlist. Such applications will be made through command channels on DA Form 1696–R, and final determination of grade will be made by The Adjutant General. To qualify, enlistment must be accomplished within 90 days after release. The new policy will have no effect on officers relieved from active duty who may have held a permanent enlisted grade in the Regular Army. Such individuals will revert to their former grade.

Demonstrations aimed at finding a fast, safe, practical method of loading military vehicles and equipment aboard ship were held recently at Fort Eustis, Virginia. Vehicles ranging in size from the ¼-ton jeep to huge tank retriever tractors, and also including vans, semi-trailers and antiaircraft guns, were lifted aboard the Land Ship at the Fort. Staged jointly by the U. S. Army Transportation Corps, Ordnance Corps, Corps of Engineers, Navy, Marine Corps and the Canadian Army, the demonstrations were followed by discussions of design problems in military equipment.

Effective 1 July the Career Management Division Office of the Adjutant General, will be redesignated as Officers Assignment Division, Office of The Adjutant General. Division functions will not be changed. The new designation is intended to reflect more accurately the Division's primary mission—assignment of officers on an Army-wide basis.

The Department of the Army has determined that those individuals who hold a dual status and elect retirement as commissioned officers will have their Regular Warrant Officer appointment terminated. Action also will be taken to terminate the Regular Warrant Officer status of such individuals already retired as commissioned officers. This action was

based on the view of the Comptroller General that an officer who is eligible for retirement in more than one status is entitled to request retirement in the most favorable status but not in both.

Aimed at stimulating interest in Army aviation, the 1957 All-Army Model Airplane Meet, sponsored by The Adjutant General, will be conducted in August 1957. There will be competitions at installation and area levels, followed by grand finals at Department of the Army level. Details are contained in Circular 28-33.

Effective this month, the functions of the Mountain and Cold Weather Training Center at Camp Hale, Colorado, will be transferred to Fort Greely, Alaska, where the training will be incorporated into existing courses at the Arctic Indoctrination School. Camp Hale will continue to be available as a training and maneuver area for Fort Carson personnel.

The Quartermaster Corps has awarded a contract to Varian Associates of Palo Alto, California, for the construction of a powerful traveling-wave electron accelerator for the Army's Ionizing Radiation Center at Sharpe General Depot, Stockton, California. The accelerator—most powerful unit of its kind, capable of producing 18 kilowatts of radiation power at 24 million electron volts—will be used to investigate the effects of ionizing radiation in the preservation of foods, leather, textiles, and other materials. It will be capable of sterilizing about 3,000 pounds of 6-inch thick units of food per hour. A companion unit, a nuclear reactor producing gamma rays, will be designed by the Atomic Energy Commission. The Center is scheduled to begin operations late in 1958.

Captain Selmer A. Sundby, an Army Aviator assigned to the U. S. Army Transportation Research and Engineering Command, Fort Eustis, Virginia, has been awarded the Distinguished Flying Cross for voluntarily performing numerous test flights on the Aerocycle, the Army's one-man helicopter, under extraordinarily difficult and dangerous conditions. During one of the tests, Capt. Sundby flew the aerocycle to determine flight characteristics which were previously completely unknown. He also established an unofficial endurance record for flying platform type aircraft when he remained aloft for 41 minutes.

Official Notes

LOGISTICS CAREER PROGRAM. AR 140–195 establish and prescribe the procedures for implementing a program to develop United States Army Reserve commissioned officers (not on extended active duty) as professionally equipped and competent Army logistics officers.

NONMATERIEL RESEARCH. AR 70–32 indicate scope and responsibilities for nonmateriel research and development in support of special warfare including unconventional and psychological warfare.

WITHHOLDING TAX. AR 35–1812 outline procedures to be followed in connection with the withholding of income and FICA taxes for military personnel on active duty.

ROTC PAY AND ALLOWANCES. AR 35–1760 cover pay during attendance at ROTC training camp, travel allowances, commutation of subsistence, and other pay and allowances for the Reserve Officers' Training Corps.

OVERSEA POSTAL SERVICE. AR 65–70 outline joint operating procedures for Army-Air Force Postal Service in oversea commands.

FLYING CLUB PROGRAM. AR 28–95 authorize establishment of Army Flying Clubs and set forth basic policies and procedures under which they function. The program is an off-duty, voluntary participation one in interest of welfare, recreation and morale.

Static Firing Test Stand Aids Army Research

ONE OF THE truly monumental landmarks of Army research and development is the static firing test stand which permits study of performance characteristics of rocket motors at Redstone Arsenal, Huntsville, Alabama.

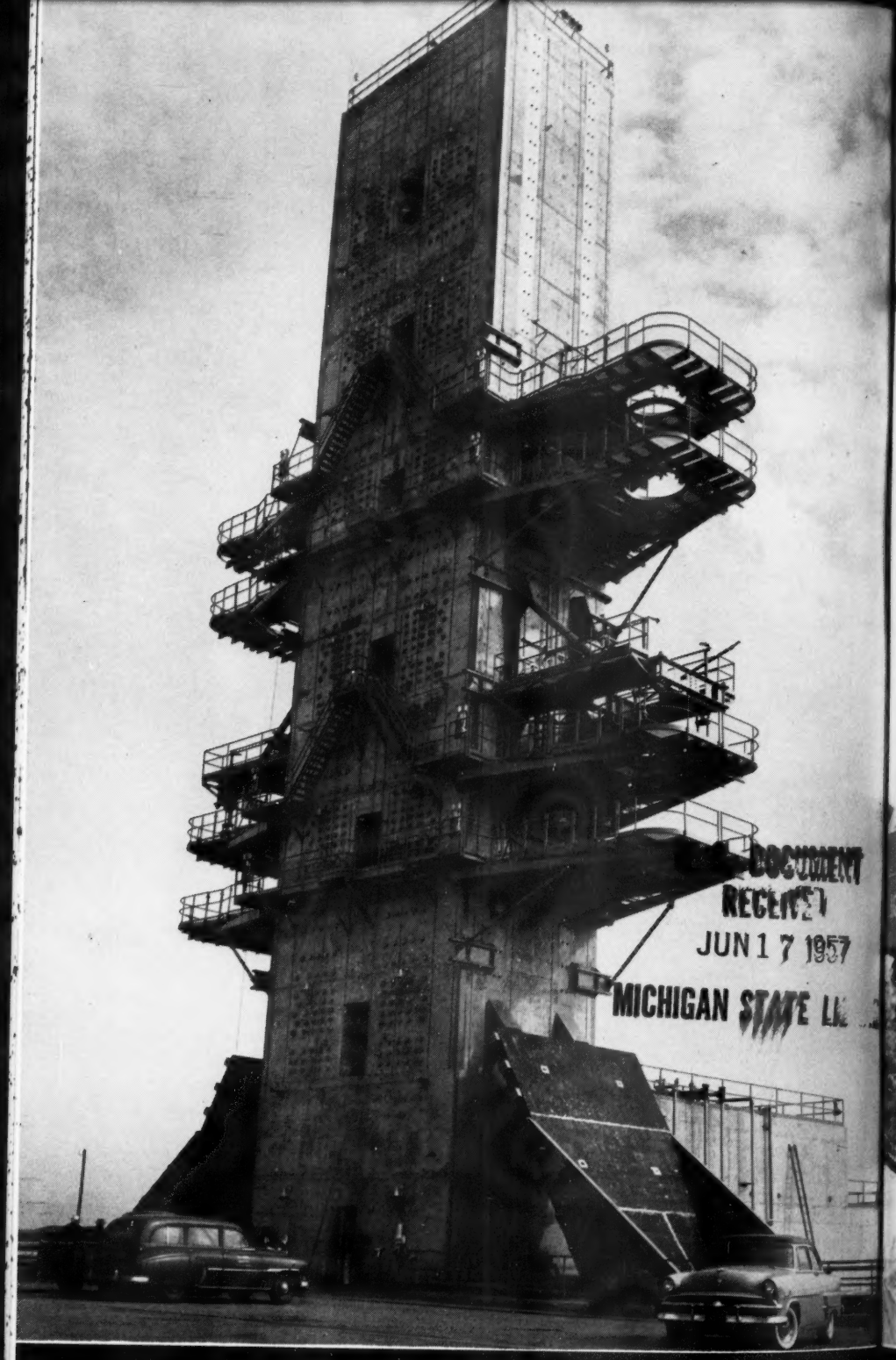
A test missile is locked into place on the stand and fired—but instead of taking off, it is held by the huge tower so that its roaring engine can be studied as though it were actually in flight.

The huge test facility is the largest in the United States, and possibly in the world. Started three years ago, it cost $12,000,000 to build, measures 30 feet by 20 feet, towers 145 feet high in reinforced concrete, and has walls 48 inches thick. A basement extends 20 feet below ground and is connected by tunnel to an observation and control blockhouse a thousand feet away.

An elevator and movable steel platforms permit servicing the missile which is lifted into place by a huge Gantry crane with a 90,000-pound capacity.

A complicated layout of other buildings and devices surrounds the test stand itself. These include a boiler-plant, booster water pump station, an engine building, a nitrogen booster station, a guardhouse, a horizontal test stand, a components laboratory, a cold calibration test stand, a propellant storage area and a ready storage area.

(For view of Static Firing Test Stand, see back cover.)



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